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*See Report in this Paper of May 22nd.*

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## Journal of Horticulture.

THURSDAY, JULY 3, 1902.

## Flowers and Showers.

THE soaking, and often ungenial, showers of this May and June have given us reason for various thoughts. Amongst these was the position many plants occupy as indicators of rain or atmospheric changes. Garden flowers are not wholly dependent upon the weather; wild flowers are, and to the majority of these a moist season is more favourable than a dry one, especially if the showers are unaccompanied by cold winds. Some people assert that both farmers and gardeners prefer a wet summer to a very dry one, but I do not feel sure about that. Very many things get irretrievably damaged which would have got on fairly well had the spring favoured us with its wonted showers. In all countries, throughout much of human history, prognostics of foul or fair weather obtainable from plants have been noticed, particularly where the climate is variable. Indeed, we come across persons who have greater faith in them than in any barometer.

Even yet, we find those who hold to beliefs we may consider to be matters for ridicule—such as the idea that the moon has an influence upon plants. Tylor tells us that the earlier gardeners never attempted sowing, planting, or grafting without scrupulous attention to the increase or waning of the moon. In Devonshire, still, the moon is considered when some fruits are being picked; Apples are supposed to "shrump" should they be gathered during the waning of our satellite. The Mushroom, too, of lowly growth, was said to own the moon's influence. With its waning, plants languished or decayed; to ensure their success, they should be sown and set between the new moon and the full. Of course, this was sometimes awkward to the old gardeners, because the moisture and

READERS are requested to send notices of Gardening appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR" at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.



dryness of the weather had also to be taken into account. Evidently opinions differed, for good old Tusser writes:—

Sow Peas and Beans in the wane of the moon,  
Who soweth them sooner he soweth too soon.

There is an old belief, not traceable to any particular country, that a profusion of flowers during May is an indication of a rainy season, showers of flowers being followed by actual showers. It has been the case this year, that the rainfall towards the end of May has had its successor in June, but the plentifulness of wild flowers in May seems to have chiefly to do with the moisture of early spring and the absence of very rough winds. Yet should the rains of May and June have cloudy, not sunshiny intervals, vegetation is apt to develop an abundance of leaves and stalks, but few flowers. We see this exemplified in gardens and fields as well as along the lanes. Hence, one old saying, that a dripping June keeps things in tune may be queried. Again, we have also a local saying, that a wet May means a fruitful year; this may depend partly upon the soil. Considering the matter with regard to our insect foes, it is certain that the foliage of plants can stand their attacks better in a moist season than in a dry one. On the other hand, we have the fact that a dry summer kills many insects, while they are juvenile larvæ or in the chrysalis state, so that is a set-off. Several of the old authors remark that it is a good sign if Midsummer Day is quite free from rain.

The great naturalist, Linnæus contrived what he called a "floral clock," by which flowers indicated certain hours of the day and night, by their expansion or closing. Many species, both wild and garden, are remarkably regular, only those of course which open and shut with the daylight vary in time with the length of day. One division differs from the rest, because the flowers are "meteoric," or in modern phrase, they are meteorological, that is, they perceive and register the passing changes of our atmosphere. Such flowers notice the warmth or chilliness of the air, and the approach or presence of rain. When the weather is unsettled, many of those flowers which should welcome the daylight remain with closed petals, the common Daisy is a familiar instance. Should the garden Marigold fail to open by seven on a summer morning, rain may be expected before long. The familiar Dandelion closes entirely when the heat is excessive, and the stalks of its down contract during wet weather, thus avoiding the dispersion of the seeds when their after-growth might be interfered with. No sure sign of rain is given by the shutting up of some flowers, which are affected by the passage overhead of a heavy cloud, that is carrying rain to another district, but occasionally they happen to be right.

No ear hath heard, no tongue can tell,  
The virtues of the Pimpernel.

This popular name belongs to several native plants, but it is supposed that the old rhyme above applies to the Scarlet Pimpernel (*Anagallis arvensis*) a lovely flower, yet at times conspicuous upon some meadows. From years of observation, I would back this plant against any artificial barometer as a rain prophet, for I never knew any shower, but a very trifling one, occur on a day when this Pimpernel is open in the morning. Hence, in the time of early English plant names, it received that of the Shepherd's or Poor Man's Weather-glass. Though it must be remembered that the flowers usually close at two or three in the afternoon, irrespective of the weather. The plant was esteemed because it was believed to have the power of drawing out splinters, and curing brain diseases, also it was good against witchcraft. A still commoner plant,

the wayside Chickweed, comes near the Pimpernel in accuracy. Lord Bacon, who was a keen observer of natural objects, noted that if the flower of it is fully expanded no rain comes for four hours or more; should it entirely shut up, he warns the traveller to put on his overcoat. Most of the species of Trefoil or Clover contract their leaves at the approach of bad weather, be it rain or only rough wind. Such, too, is the habit of the pretty Woodsorrels.

One sign of rain is the flight of the downy seeds from the Coltsfoot, Dandelion, and the Thistle tribe generally, when there is no wind. Formerly, the heads of the Fuller's Teazle were hung up in cottages with free access to the air. If the weather was likely to be cold and windy, these heads turned smoother, and against moisture they closed their prickles. Then other plants, fresh or dried, were brought indoors, under the belief that they gave protection against lightning or thunderbolts. Wreaths of wild Chamomile were held efficacious, also a branch of the Elder or the Bay (*Laurus nobilis*). Amongst curious beliefs connected with rain, was the one that showers could be produced by setting Fern on fire, which was carried into practice upon commons and in copses.

Everybody has seen the effects of hoar frost upon trees during the winter months, how, after a cold night, the ice, that has clothed branches and twigs in white array, descends when the sun comes out, as a shower of moisture, perhaps to freeze again below. Besides the winter droppings, there are other instances of raining trees. Many of them (also some plants) have the power of absorbing a large quantity of water, which collects at the points where leaves join branches, and branches the stem; this is finally discharged by drops, which gives the tree all the appearance of producing a shower. Of course, some droppings from the trees are caused by the work of insects.—J. R. S. C.

## Edinburgh Botanic Garden Sixty Years Ago.

"Immediately upon his entrance to the grounds the stranger is struck with the luxuriance and vigour of the evergreens, to the cultivation of which Mr. William McNab, the able curator, has devoted much attention. On the southern side of the garden there is a large collection of hardy plants arranged according to the Natural System of Jussieu, such as Ferns, Grasses, labiate, cruciform, leguminous, umbelliferous, and composite plants, &c. Close to this collection is a small pond, containing Rushes, Water Lilies, &c., and a ditch containing those plants, which thrive best in such a situation. To the north of this arrangement is a collection of British plants arranged according to the Linnæan or artificial system, with the name attached to each species. On the eastern side are the plants indigenous to Scotland, and on the west a few which are found in England and Ireland, but not in Scotland. A little to the east of this British arrangement is a collection of Roses. Proceeding northwards we come to a general collection of hardy evergreens, chiefly exotic; to the east of which is a collection of medicinal plants, with the names and Natural Orders attached: We then reach the greenhouses. These contain a large collection of exotics, which thrive admirably. The western division contains Heaths, Epacridæ, Dryandras, Proteas, Grevilleas, Diosmas, &c., while in the eastern division we have a stove with northern exposure in which epiphytes are cultivated with great success. In the other greenhouses of the front range there are many interesting plants, among which may be mentioned Plantains, which bear fruit well, Papaw tree, Pitcher plants, Papyrus, Indiarubber Fig, Cacti, Cinnamon, Tea plants, Amaryllids, Aroids, Euphorbias, &c. In front of this range of houses is a piece of ground on which many of the plants of warmer regions are cultivated in the open air, being carefully protected during winter. Behind these houses is a smaller range in which numerous seedlings are cultivated, and a large Palm house, about 45ft high, in which are found Plantains and Bananas, Sago Palms, Fan Palms, Cabbage Palms, Date Palms, Cocoa-nut trees, Sugar-cane, Bamboos, Screw Pines, &c. The houses are heated partly by hot water and partly by steam. From the top of the boiler house there is a fine view of Edinburgh. Against the high northern wall of the garden, having a south aspect, many valuable exotics are trained, as Magnolias, Acacias, Edwardsias, Camellias, Myrtles, Eucalypti, &c. The garden embraces an extent of 14½ English acres." — ("Blackie's Picturesque Tourist of Scotland, 1846.")





**Odontoglossum crispum var. Lady Jane.**

At the exhibition of the Royal Horticultural Society, in the Inner Temple Gardens, on May 28, this handsome and distinctive variety received a First Class Certificate. It was shown by J. Wilson-Potter, Esq., Elmwood, Croydon. The flowers are large and of good substance, the petals being marked with lines of rich chestnut that run almost horizontally to the apex; the lip, too, is distinctive. The sepals are flushed with mauve-pink over white. It is a very sweet Odontoglot.

**The Week's Cultural Notes.**

*Cattleya superba* is one of the very finest in this genus, and, unlike the majority of species, it is found to be difficult of culture. Newly imported specimens move off well for a few years, but there soon comes a time when a falling off in the size of the growths and flower is discernible, and it is then only a question of time before the plant ceases to be of value. Without a doubt it is in the atmospheric treatment we are wrong with this superb Orchid. The plants are easy enough to establish, and attain a good hold upon the home of their adoption, but they don't "hold on," to use a customary phrase.



**Odontoglossum crispum Lady Jane.**

Heat they must have, and light and moisture in plenty, and this we can give. What we cannot arrange is the constantly changing yet ever correct atmosphere that obtains in their native habitat. Beds of fermenting leaves in the house have been tried, and also chemicals of various kinds in the hot water troughs, but these are only very paltry attempts to imitate Nature, and in the matter of keeping "miffy" species in health we are as far off now as ever. I have been most successful with *C. superba* in pots filled nearly to the rim with crocks and charcoal, the little compost given consisting of three parts of sphagnum to one of peat.

The plants were grown on an elevated stage in a span-roofed house, their companions being *Dendrobiums* and that other peculiar species *Epidendrum bicornutum*. When the flower buds showed in the point of the sheath the *Cattleyas* were removed to the *Cattleya* house, and as the blossoms opened to a still drier and cooler structure, to conserve them. A few weeks of this treatment so hardened and ripened the bulbs that when again returned to the growing quarters in autumn they seldom started out of season in the declining temperature.

For several years—as long in fact as they were under my charge—these plants continued satisfactory, and flowered very freely every year. Some growers pin their faith to blocks for *C. superba*, but when a plant is sufficiently vigorous to attach itself freely to pots and baskets of compost, why confine it to the very poor nutriment obtainable from wood blocks? Cork blocks lined with moss are better, as the roughness of this material is liked by the roots, and so are many of the devices made with cork, but I have always found the usual pot or basket preferable to either.—H. R. R.

## Coronation Rose Show and Conference.

(Concluded from page 554, last vol.)

In connection with our report of the exhibits and the papers read at the conference held under the auspices of the Royal Horticultural Society at Earl Ilchester's seat in Kensington last week, we furnish a number of characteristic views of the beautiful home just referred to. For a full description of the garden and a brief history of Holland House the reader is directed to our issue for March 14, 1901.

The proceedings at the exhibition last week were as satisfactory as could have been hoped for, after the consequential news which oppressed us all on Tuesday afternoon, the 24th ult. The gate takings on the first day were over £200, we believe, and the show received distinguished patronage, the Duchess of Connaught, the Sultan of Perak, and others of distinction being present. On neither day was there any music to enliven the interest in things, but the superb collections within the tents, and the delightfully sunny weather and breeze outside, were sufficient to prevent strangers from being dissatisfied. The officials of the Society each and all deserve recognition for their part in the conference arrangements.

Mr. R. C. Notcutt, Broughton Nursery, Ipswich, staged *Arctotis grandis*, a new half-hardy annual, with silvery ray petals and dark disc; he also had a collection of hardy flowers.

Messrs. Jones and Sons, from Shrewsbury, brought Sweet Peas, and tastefully arranged them in vases. Here our selection was Black Knight, Mrs. Eckford, Gorgeous Lovely, Hon. Mrs. Kenyon, Emily Henderson, Splendens, and Her Majesty.

Messrs. Wallace and Co., Kilnfield Gardens, Colchester, showed a gorgeous group of hardy flowers on the grass. Each variety was set up in great armfuls, and thus their true character was brought strikingly forward.

Messrs. Wm. Cutbush and Son, Highgate, London, N., set up a huge exhibit of the new *Marguerite* named Coronation, which received an award of merit on June 10. We cannot too highly commend this plant to those who have much cutting to do. Their new scarlet flowering *Pelargonium*, Caroline Schmidt, contrasted well with the *Marguerite*.

Messrs. Dobbie and Co., Rothesay, had intended to show Sweet Peas, but these were unadvanced, and the *Aquilegias* which took their place were a charming substitute. These were arranged in glasses, and each variety shown distinctively. A large number of them are now possessed of sweet and bright colours, giving them additional merit. Their Giant *Mimuli* were indeed large and finely formed, as well as richly coloured. Show Pansies and *Violas* in bunches occupied about half of the exhibit, the choice varieties of the former being Lord Roberts, Duke of Argyle, Miss Neil, Colonel Buchanan, K. Stirling, Jas. Dodds, Kate Dow, and W. B. Child. Their *Violas* included Nellie Currie, Tessy, General Baden-Powell, Bronze Kintore, Lark, and Princess Ida.

Messrs. Blackmore and Langdon, Twerton Hill Nursery, Bath, though almost strangers to London, came with magnificent double-flowered tuberous *Begonias*, whose quality in all respects must be recorded as second to none we have seen.

The new Rose, Dorothy Perkins, whose merits we have already described on more than one occasion, was staged in fine style by Messrs. Cutbush and Son, of Highgate.

Mr. A. W. Wade, Riverside Nurseries, Colchester, was strong in *Ixias*, *Irises*, and other hardy flowers.

Mr. M. Pritchard, nurseryman, Christchurch, Hants, had in his collection the very beautiful *Iris Pseudo-Acorus foliis variegata*, *Pyrethrum florentina*, pale pink, *Iris spuria*, and a handsome assortment of single and double *Pæonies*. Everything was in excellent condition.

Messrs. Paul and Son, The Old Nurseries, Cheshunt, N., contributed, among other things, *Verbascum olympicum* (the whole plant cut and staged); also the trailing *Tropæolum polyphyllum*, *Centaurea montana rubra*, *Campanula mirabilis*, *Thalictrum rubrum*, *Gunnera scabra* (so suitable for the water's edge as a foliage plant), together with *Heuchera sanguinea splendens*, *Hesperis matronalis plena*, *Lupinus arboreus*, and other hardy flowers. *Aquilegias* and *Pæonies* were strongly in evidence. A good collection.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, were represented by a group of select greenhouse flowering plants, including *Metrosideros floribunda*, *Erica Cavendishi*, *Boronia elatior*, *Erica tricolor*, *Hydrangeas*, *Carnations*, and *Anthuriums*, all in grouplets, and each fine.

The Alderborough strain of St. Brigid *Anemones* were staged in better style than hitherto, even although they have been seen in such great excellence at earlier London shows. They are indeed magnificent.

Mr. Ed. S. Towell, Hampton Hill, Middlesex, sent a design of the Royal crown made of the scarlet flowers of the Zonal *Pelargonium Fire Dragon*.

Messrs. John Peed and Son, West Norwood, S.E., staged Gloxinias in many beautiful and delicate colours, and the plants were well grown. A group of Sweet Peas came from Mr. C. Aubrey Watts, 30, Mark Lane, E.C., but they were too closely packed. Messrs. Jackman staged hardy flowers, the table being much too high.

#### Orchids.

Orchids did not form nearly such a show as they do at the Temple Gardens, but a number of handsome collections were exhibited. Mr. Jeremiah Colman (gardener, W. P. Bound), Gatton Park, Reigate, contrived a wonderfully sweet display of Odontoglossums with particularly good crispums, *Miltonia vexillaria*, *Masdevallias*, *Cattleyas*, and other things.

Messrs. Sander and Sons, St. Albans, had a number of magnificent Odontoglossums, and staged in a new style, with all the pots and pedestals embedded in green moss. Their *Lælio-Cattleya Memoria Baroness Schröder*, is of excellent form, with good dark purple lip and pale segments. Their Odontoglossum *Alexandræ* Princess Louise, carrying nine large and finely formed flowers, is a good red spotted variety. *O. Harvengtense* Princess Margaret is an excellent subject of large size and finely marked with brown. It received an Award of Merit. A most graceful Odontoglossum *Alexandræ* Princess Patria, with nine huge flowers nicely blotched. Some of their white crispums were distinctive and very fine, but the whole group was most choice.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, were particularly strong in *Cattleyas*, showing *C. Wagneri* in magnificent form, together with *Lælio-Cattleya Ascania*, creamy; *L.-C. Pallas*, *L.-C. Canhamiana*, and the beautiful *Lælia purpurata*, carrying a dozen large flowers.

M. A. A. Peeters, Brussels, staged *Lælio-Cattleya* x *The Coronation*, a monster hybrid between *L. tenebrosa* and *C. Mossiæ*. The lip is violet purple, other petals and sepals deep mauve. Mr. H. Little staged a well-flowered plant of *Lælia grandis tenebrosa*. Sir Trevor Lawrence, Bart., received a Cultural Commendation for *Habenaria rhodochila*, with orange-scarlet flowers.

Messrs. Stanley, Ashton, and Co., Southgate, N., contributed Odontoglossums and a variety of other subjects, including *Lycaste Deppei*, well flowered; *Cattleya* x *Miss Harris superba*, an extraordinarily fine flower, coloured deep purplish-rose, and of splendid form. It received a First Class Certificate. They had many other fine things.

Messrs. Charlesworth and Co., Heaton, Bradford, furnished an immense and handsome display of Odontoglossums, *Oncidiums*, hybrid *Cattleyas*, and the choicest of other Orchids. Messrs. J. Cowan and Co., Gateacre, Liverpool, staged Odontoglossums, *Cattleyas*, *Lælias*, *Cypripediums*, &c.; and Sir Frederick Wigan, Bart., had also a good exhibit.

#### Roses.

The Rose competitions, as everybody expected, were exceedingly slack, many of the classes being empty and others having only one entry. Such was the case with classes 3 and 4, in the first of which A. Hill Gray, Esq., Beaulieu, Newbridge, Bath, received first prize with fair blooms of the following. Back row: Mrs. E. Mawley, Comtesse de Nadaillac, Medea, Auguste Comte, Souv. d'Elise Vardon, The Bride, Anna Olivier, and Maman Cochet. Second row: Hon. E. Gifford, Golden Gate, Maréchal Niel, Catherine Mermet, Princess of Wales, Princess Beatrice, Souv. d'un Ami, Jean Ducher. Third row: Caroline Kuster, Bridesmaid, Marie Van Houtte, White Maman Cochet, Madame Bravy, Reine Marie Henriette, Souv. de S. A. Prince, and Cleopatra.

The Rev. F. R. Burnside, Great Stanbridge Rectory, Rochford, Essex, was first in class 4 with twelve distinct blooms, including Viscountess Folkestone, Marquis Litta, Antoine Rivoire, Niphetos, Catherine Mermet, Souv. d'Elise Vardon, La France, White Lady, Comtess of Caledon, Mad. Cadeau-Ramey, Mme. Van Houtte, and Cleopatra.

In class 5, for six blooms, distinct, Mr. T. B. Gabriel, Elinstrad, Woking, led with fair blooms. Rubens was good. Gen. Jacqueminot small, but good; Souv. de S. A. Prince, and Mrs. Ed. Mawley was also a good flower. His other was Marquis Litta. Second place fell to Mr. R. W. Bowyer, Hertford Heath, Hertford, with a good Mrs. W. J. Grant and White Lady. The other four—Viscountess Folkestone, Marquis Litta, Lady Mary Fitzwilliam, and Maréchal Niel—were only fair. Third came Mr. G. W. Cook, Muswell Hill Road, Highgate. Six entered. No one entered in class 6.

In class 7, for forty-eight blooms, distinct, open, the Silver Cup fell to Messrs. F. Cant and Co., Braiswick Rose Gardens, Colchester, with weak blooms, including the varieties Mrs. W. J. Grant, Rainbow, Marquis Litta, Mon. Noman, Gustave Piganeau, Ulster, Rev. Alan Cheales, and Clara Watson. Second row: Lady Roberts, Souv. de Pres. Carnot, Dr. Sewell, Maréchal Niel, Marie Bauman, Lady Mary Fitzwilliam, and Crown Prince. Front row: Mme. G. Luizet, W. J. Bennett, Bessie Brown, Mme. Montet, Grace Darling, Marie Van Houtte, Camoens, and Souv.

de M. Eugène Verdier. Messrs. Prior and Co., Colchester, came second with a very fair set of blooms, the best being Souv. de S. A. Prince, Maréchal Niel, and Gustave Piganeau.

In class 8, for forty-eight single blooms, distinct, open, the first prize of a Silver Cup fell to Mr. George Prince, Longworth, Berks, who staged a wonderfully even set, though somewhat ragged. In the back row he had Caroline Testout, Rubens, Viscountess Folkestone, R. M. Henriette, Souv. de S. A. Prince, Souv. d'un Ami, and Medea. Second row: Clara Watson, Grace Darling, Maréchal Niel, Capt. Hayward, Hon. Edith Gifford, and Comtesse de Nadaillac. Front row: Mme. de Watteville, Duke of York, Marie Van Houtte, La France, Catherine Mermet, Maman Cochet, The Bride, and Mrs. W. J. Grant. Messrs. R. Harkness and Co., Hitchen, Herts, were second with poor blooms, the best being Ulrich Brunner, and Helen Keller. Mr. A. Hill Gray led in class 9, but the succeeding class was without a supporter.

In class 11 Mr. T. B. Gabriel led with weak blooms; and second, Mr. R. W. Bowyer. No award was given in class 12 for six blooms of any one variety; and two entered in class 13. Here Mr. G. Prince, of Longworth, Berks, was first with one of the best stands in the show. This was for eighteen blooms in distinct varieties, and he staged Comtesse de Nadaillac, Niphetos, The Bride, Maréchal Niel, Bridesmaid, Princess of Wales, White Maman Cochet, Souv. d'Elise Vardon, Amazone, Mme. Cusin, Marie Van Houtte, Maman Cochet, Medea, Rubens, Souv. de S. A. Prince, Anna Olivier, and Jean Ducher. The second prize fell to Messrs. D. Prior and Son, Colchester, with poor flowers.

Class 14, first Mr. Frank Cant, Colchester; second Messrs. G. Cooling and Sons, Bath; third B. R. Cant and Sons, Colchester. Class 15, first O. G. Orpen, Esq., Colchester; no second. Class 16, first Messrs. G. Cooling and Sons, Bath. Class 17, no entry. Class 18, first Messrs. B. R. Cant and Sons, Colchester; second Mr. G. Prince, Longworth, Berks. Class 19, first Messrs. B. R. Cant and Sons, Colchester; second Messrs. G. Cooling and Sons, Bath. Class 20, first Mr. Frank Cant, Colchester; no second. Class 21, no entry. Class 22, second Messrs. Paul and Son, Cheshunt; no first prize awarded. Class 23 (new Roses), first—Gold Medal, Mr. Frank Cant, Colchester, H.T. Lady Roberts; second—Gold Medal, Messrs. Paul and Son, Cheshunt, Weeping rugosa alba. Class 24, first Mr. O. G. Orpen, Colchester; second Miss B. Langton, Raymead, Hendon. Class 25, first Mr. C. Turner, Slough; second Messrs. Paul and Son, Cheshunt. Class 26, first Mr. G. Prince, Longworth, Berks. Class 27, no competition.

#### New Roses.

*H.T. Lady Battersea* (F. Cant and Co.).—A lovely Rose of exquisite form, strong in build, and outstanding in a collection. The stout, smooth petals are coloured a reddish apricot, shading to cream at the edges. It may be likened to the Sunrise type of flower. Gold Medal.

*Weeping rugosa alba* (Paul and Son).—This Rose is remarkable for its pendent habit of growth, combining also the vigour of the type. The prickles are very prominent, but the foliage is smaller, as it seemed, than the erect rugosa. The flowers are large and pure white, the petals irradiating from the disc, and being contortions. Gold Medal.

#### Trees and Shrubs.

In the open air Messrs. J. Laing and Sons, Forest Hill, made a pretty display of foliage and flowering plants, the Acers being conspicuous, while a collection of flowering shrubs, was represented by Rhododendrons and Kalmias.

Messrs. W. Fromow and Sons, Chiswick, sent a semicircular group of Acers, Bambusas, and Lilioms, edged with well grown plants of *Aralia pentaphylla variegata*. The group was well arranged and certainly appreciated.

A most effective exhibit was arranged in the open air by Messrs. Jas. Veitch and Sons, Limited, Chelsea, consisting of a group of Aquilegias of beautiful colours, with some fine spikes of *Eremurus robustus*, backed with some fine specimens of Bamboos.

Mr. J. Russell, Richmond Nurseries, Richmond, made a fine group of foliage plants, chiefly of a variegated character, the Acers, Ivies, Ligustrums, and various variegated Conifers making a beautiful exhibit.

Messrs. Cutbush and Son, Highgate, had an enormous collection of clipped and trained trees arranged in the open air, plants of all sizes and fantastic shapes being represented.

Messrs. J. Cheal and Sons, Crawley, made a fine exhibit of hardy foliage and flowering plants, the Acers and Conifers with their young foliage being most attractive, the whole being well arranged.

A grand collection of Acers came from Messrs. T. Cripps and Son, Tunbridge Wells. The collection was well arranged, and the plants beautifully grown; altogether a most effective exhibit.

#### Certificates and Awards of Merit.

*Asparagus myriocladus* (R. Greenfield, Jun.).—"A novelty from South Africa." The branchlets are deep green and plume-



like. Mr. R. Greenfield, Jun., 17, Bath Street, Leamington Spa. First Class Certificate.

*Begonia Masterpiece* (Blackmore and Langdon).—A bold, large double flower, coloured deep, rich, glowing crimson. The substance is good, and also the habit of the plant. Award of Merit.

*Begonia Miss Dorothy Hardwick* (Blackmore and Langdon).—The form is not so good in this double tuberos. The petals are slightly fringed, silvery at the edges, and coloured deep rose-pink. Blooms full and high in centre. Award of Merit.

*Begonia Professor Lanciani* (Blackmore and Langdon).—A double tuberos, of magnificent proportions, coloured scarlet shaded bronze, very bright and showy. Award of Merit.

*Cattleya x Miss Harris var. superba* (Stanley, Ashton, and Co.).—(C. Schilleriana and C. Mossiæ).—Magnificent flowers; sepals and petals purplish rose, lip of a bright rosy carmine, with darker veining. First Class Certificate.

*Cattleya x Prince Edward* (Sir F. Wigan and Sander and Sons).—A cross between C. Warszewiczii (female), and C. Schilleriana (male). A lovely flower with bright, deep rose-purplish segments, somewhat revolute, and with deep bright purple lip, well expanded in front, and with yellow throat. Award of Merit.

*Cypripedium Godfroyæ leucochilum*, *Hessle var.* (W. P. Burkenshaw, Esq.).—A richly marked and netted flower, the netting being dark purple, over a creamy ground. The substance is good. First Class Certificate.

*Iris orientalis var. Snow Queen* (Barr and Sons).—A most useful and decorative spotless white variety of this handsome species. Award of Merit.

*Iris variegata Sunshine* (G. Yeld, Esq.).—Certainly a most beautiful Iris, with canary-yellow standards curving inward, and paler falls. Award of Merit.

*Laelio-Cattleya Martinetti var. Prince Arthur* (Sander and Sons).—The long delicate sepals, one inch broad, are bronzy-tea coloured, the petals are brown and wavy, the long lip is folded over the column, but expands in front, and is very deep purple back in throat, the edges much lighter. Award of Merit.

*Laelio-Cattleya Aphrodite var. King Edward VII.* (Sander and Sons).—A superb variety of this noble hybrid with undulating segments, white faintly tinged with lilac, orange throat, and broad, open lip, bright deep purple, and fringed edge. (First Class Certificate.)

*Miltonia vexillaria gigantea* (Sir F. Wigan, Bart.).—A very deep and rich form, coloured rose-purple. First Class Certificate.

*Miltonia vexillaria, var. Queen Alexandra* (Sander and Sons).—The lip is greatly enlarged, being 3½ in broad, and as deep, with a deep indentation at the apex. The colour is pure white, with slight flush of mauve at the base of the petals, and the column is yellow. Award of Merit.

*Odontoglossum crispum, var. Princess Victoria* (Sander and Sons).—A charming spotted crispum of good form and character, the segments with fringed edges. The segments are flushed with deep mauve, and bear large and small crimson spots. Award of Merit.

*Odontoglossum crispum punctatissimum, var. Princess Maul* (Charlesworth and Co.).—A huge and magnificent variety of good form and shaded mauve; it is nicely spotted with deep mauve. The lip is large, with brown spots and yellow base. Award of Merit.

*Odontoglossum Harvenytense, var. Princess Margaret* (Sander and Sons).—The plant bore three flowers of fair form, the segment inclining inwards. The ground colour is pale tea, marked and blotched with brownish-red. Award of Merit.

*Odontoglossum crispum Her Majesty* (Sander and Sons).—A magnificently large and handsome white crispum, with one or two reddish-brown spots on each of the two lower segments. Award of Merit.

*Odontoglossum crispum, var. Imperatrix* (Sander and Sons).—Of good substance and fair form, the segments very distinct. They are white at the base and coloured purplish mauve, with white edges. A showy plant, carrying eight blooms. Award of Merit.

*Odontoglossum crispum, var. Princess Helene* (Sander and Sons).—The flowers are large, but apparently fragile. Largely coloured with brownish red over white. Award of Merit.

*Sparaxis Fire King* (Wallace and Co.).—A brilliantly showy variety with flowers nearly 2 in across, yellow radiated centre, blackish on the middle of the petals and crimson at the tips. Award of Merit.

*Sobralia x Wiganie* (Sir F. Wigan, Bart.).—The sepals and petals yellowish, and the lip pale purple. First Class Certificate.

*Rhododendron x Lady Clementine Walch* (John Waterer and Sons).—The colour is pink, with a suspicion of mauve and a pale peach-blossom centre with greenish and yellow blotches on the upper segment. The trusses are massive. Award of Merit.

*Zygosis Rolfceana* (Sander and Sons).—A hybrid between *Aganisia lepida* and *Zypopetalum Gautieri*. The lip is purplish-violet, the other segments the same colour at the base with green tips. The raceme carried three flowers and four buds. Award of Merit.

#### The President's Introduction.

The Very Reverend S. Reynolds Hole, Dean of Rochester, presided at the opening of the Rose Conference, and said that it was happy and opportune that the Royal Horticultural Society should honour the coronation of Queen Alexandra in the present manner. No one would dispute the Royal supremacy of the Rose. If you take the three great qualities of excellence in flowers—colour, form, and fragrance, there is no flower to compare with the Rose. Her Majesty is universal, from the humble cottage to the millionaire's manor. Queen Rose is grown to perfection by the hewers of wood and drawers of water quite as much as by the lord of the forest and lady of the lake. The Rose is suitable for the shrubbery, for walls, hedges, arbours, pillars, pergolas, beds, borders; for the decoration of the banquet, the bridal bouquet, and open bowls. And we can have Roses growing al fresco from May to December, abundant as they are beautiful. Many of our finest Roses had come to us from sunny France, and it was meet on this occasion for English growers to express their indebtedness to their French confrères for the many varieties obtained, led by La France, the queen of the garden Roses. But we have found out the art of raising beautiful varieties, and are not behind either in the forcing or culture of them. Forty-five years ago the Dean had inaugurated the first show of the National Rose Society, and it has stood well by exhibition Roses; but we now delight in Roses for the beautifying of our gardens—the decorative Roses, lovely varieties of the Chinese Rose. In conclusion, the Dean said: "As Chaplain-in-ordinary to the Queen of Flowers, I have said grace before meat; I have read the menu; may health and happiness wait upon both."

#### Mr. Baker on New Roses.

Following the chairman's remarks, Mr. J. G. Baker, late head of the Herbarium at Kew, delivered a few sentences on two species of Rosa from the S.W. of the United States that have recently come to notice. His full descriptions were written but not read, as was the case with most of the papers, but each and all will be fully printed in the Society's Journal. *Rosa stellata* was one of the new species, with a habit like the Scotch Rose, and similar prickles, but a marked characteristic is its three leaflets at the top of the stalks, like those of a *Potentilla*. It is found 5,000ft to 6,000ft above sea level. It is not yet in cultivation. The other species is *R. minutifolia*, from the coast region of South California. Mr. Baker surmised that our climate would be too warm and too damp for its successful growth. Coloured plates of the two were handed round.

#### Rev. J. H. Pemberton on H.T.'s.

Quoting from Mr. Geo. Paul's paper, entitled "Roses Since 1860," read at the National Rose Conference of 1889, Mr. Pemberton said that the period 1860 to 1889 had fairly been called the era of Hybrid Perpetuals and Teas, but that "the class of Hybrid Teas do not seem to have made real advance." During the last ten years, however, the H. Teas had increased 100 per cent. Formerly the Rose exhibition schedules were compiled almost entirely for the Hybrid Perpetuals, but the introduction of Her Majesty set rosarians a-thinking. In recent years there has been a steady increase in the number of this class of Rose shown and introduced, though many things contributed to keep it reduced. Thus no truly red variety was admissible among the H. Teas; and then the question had to be raised: What is a Hybrid Tea? The varieties themselves seem to differ so very materially, and it would seem that if introducers are not very sure to what their Roses belong at the moment of distributing them they daub them down as H.T.'s! H.T. Lord Salisbury differs considerably in general characters from Caroline Testout, and what prevents Gruss au Teplitz from being classed as a China?

After further discussing the great differences to be found among Roses of this section, and of the restrictions imposed in regard to them by the National Rose Society, Mr. Pemberton furnished a few cultural hints, in which he suggested very light pruning. "It is better," he said, "not to prune at all than to prune too hard." Certain varieties seem to have peculiarities of their own, and they do not all like the Briar stock. He had found that Mrs. W. J. Grant succeeded best on the Manetti, but personal observation of the varieties one grows is the only guide to the discovery of their likes and dislikes. Mr. Pemberton named the pioneer raisers of H.P.'s—the Dicksons, the Pauls, Bennett, Nabonnand—and referred to the characteristics of some of the finer varieties. He concluded by pleading for H.P.'s of bright red shades, and stigmatised many of the more recent gold medal Roses as "washed-out things."

#### More About Hybrid Teas.

The next essayist was Mr. Alex. Dickson, from Newtonards, whose success with the class, in company with his brother, is unparalleled. Mr. Dickson divided these into the following five classes, and discussed the merits of a number of the leading varieties in each. First, he took Beauty, Glory, and Modesty as representatives of his first group, the single Roses. Secondly, bedding Roses, with semi-double flowers, and named Marquis de

Salisbury and Killarney, which, if disbudded, forms a good exhibition Rose. Thirdly, free-flowering perfectly double varieties. First in this list was Mrs. W. J. Grant, which yields a mass of blooms early, and continues to do so till frosts appear. It is the first and, so far, only seedling from La France, receiving a gold medal in 1892. It was sold to an American firm, who sent out their stock under the name of Belle Siebrecht. Liberty is a new brilliant crimson Rose, which was raised in Ireland and sold to America. In March, 1900, it was distributed, and within one month the number of plants sold amounted to 100,000. Kaiserin Augusta Victoria was received from Germany, and welcomed on account of its colour. Marjory, a good white, was named after Mr. Dickson's own daughter, and was introduced in 1895. It comes splendid in the bud. Other three named were Caroline Testout, L'Innocence, and Countess of Caledon.

Fourthly, pillar and climbing H.T.'s. Here Cheshunt Hybrid was one of the finest, with Gruss au Teplitz (1899) and England's Glory. Mr. Dickson also named the following in his fifth class, good exhibition sorts presumably:—Mildred Grant, a gold medal Rose in 1900, and which possesses splendid form and colour. He believed that this must stand as the most prominent Rose raised in the last century. Duchess of Portland is also good; and so is Robert Scott, raised at the Pennsylvania Rose Nurseries, Philadelphia. Bessie Brown, sent out in 1899, had already reached the second place in the Rose analysis (see *Journal of Horticulture*, October 31, 1901), and it will no doubt oust Mrs. John Laing from the place this old variety has held for so long. The blooms are massive and altogether meritorious.

In concluding, the essayist said that few people had any knowledge of the hybridist's work. He would have liked to have been able, but he felt he could not lay down rules for hybridisation that could be depended on for set results. He had crossed and hybridised 50,000 Roses, yet not one hundred varieties had he sent out. He had studied the question of hybridisation and had failed to be able to reduce its principles to theory. There seemed to be no stability or dependableness on the results.

#### The Weather and Roses.

Mr. Edward Mawley, in reading a paper on "The Sensitiveness of Cultivated Roses to Changes of Weather," mentioned that, after annually for the last twenty-five years contributing a résumé of the weather report to the National Rose Society, instancing the effect of the same on various species and varieties, the conclusion he had arrived at was that there is no more sensitive plant than the Rose to changes in temperature, rainfalls, &c., which come under the one head of weather. Many—perhaps the great majority—of our cultivated varieties are only what may be termed half-hardy, and for an example of a hardy one, Bennett's Seedling still enjoys a reputation among the best. It is a marvel that the English climate, which really only satisfactorily supplies one of the conditions most necessary to the successful growth of the Rose—i.e., a humid atmosphere—suits this subject so well. Moderate cold, experience teaches, is good, but in severe winters often much harm is wrought. Great mildness is also undesirable, because when such exists the plant is deprived of that rest which it needs to defend it against late frosts. A beneficial practice is to draw the soil in autumn well up and around the plant, thus protecting it in a measure from this evil. The greatest trials the rosarian has to endure are, after passing successfully through a severe winter, a late frost or severe drought when buds are in progress mars what would otherwise be at least a satisfactory result of months, and perhaps years in some cases, of earnest work.

#### Roses under Glass.

Mr. George Mount, of Canterbury, read a most interesting and instructive paper on "Roses Cultivated under Glass." For February blossoms, Mr. Mount advised pots to be used, which, after flowering, can be placed outside, thus enabling the house to be used for other purposes. Also, in this method of culture, more command is held over the plants. Eight-inch pots are used, and October is the time for the potting to take place, and the plants well potted to where budded. Protection from bad weather, and syringing if bearing much foliage, are two necessary items in a successful start. In the November twelvemonth pruning and top-dressing must be attended to, and hard pruning is beneficial, after which only sufficient fire heat to protect should be used. When leaves appear no syringing should take place, as this is not needed to keep clean; fumigate at first trace of fly. When the buds appear, feed, and aim at growing the plants strong enough to need no staking. After blooming, encouragement should be given to make good growth, and they may then be turned out into cold frames. When the method of planting out in borders in houses is adopted, a house 20ft wide, with two paths, giving 2ft 4in borders and one central 8ft bed is the form to employ. The houses should be kept close to allow buds to break well, and Teas or Hybrid Teas may be used. As an instance of better growth on secondary wood Catherine Mermet was cited.

The conference concluded with a hearty vote of thanks to Dean Hole. No further papers were read on the second day.

## Improvements in Hardy Plants.\*

It is now nearly forty years since I first interested myself in hardy plants. It was at the period of the "flare-up style" of gardening, masses of brilliant colour for about three months, and the remaining nine almost bare. Many collections in nurseries were destroyed, and I have had to run through these doomed plants, buy up what I wanted at a nominal price, and see these same collections reinstated within ten years from the time they were destroyed.

The only collections of repute in those days were those of Rollisson of Tooting, the St. John Wood's Nursery; Yule of Yarmouth, and May of Bedale. These collections were limited in extent, but unlimited in price. *Digitalis purpurea* was priced at a shilling a plant; *Gentiana affinis* at the same figure. One had taken five minutes and the other five years to make. These were the sort of inducements offered to the public for buying hardy plants. They were practically ignored by everyone, and the trade always looked upon them as a great nuisance, costing far more than they were worth. To show how much they were appreciated, I will just give you my first experience at the old Horticultural Gardens at South Kensington. It was suggested that a group of some of the wonderful plants that were being collected together at Tottenham should be exhibited at one of the big summer shows. I believe this was the first time that anything like a representative collection of hardy stuff had been shown.

A lot of preparation had been made, space had been written for, and on the appointed day a van with plenty of assistance appeared at the great horticultural exhibition. I saw the superintendent, Mr. Eyles, shortly after my arrival, and asked him for a space. He told me I should have to wait and see if any were left. I did not like my reception a bit. After waiting and worrying till about eight or nine o'clock, he told me he would come and see what I had got. "Go and wait in the yard till I come," and I was foolish enough to go. After again waiting some considerable time I went and found him, and got him to go and have a look at the class of plants I proposed to exhibit. He looked at them in the van, laughed, and said; "I cannot have such rubbish here." However, after waiting another hour or so, a man was sent to me stating they had got a place for me in the western arcade among the exhibits of wire stands, pottery, and other accessories to the garden. I was given two large wire stands to set up pots, pans, and boxes, and did the best under the circumstances. Now every show in the country largely depends upon hardy plants to fill the tents.

It is impossible in a short time to go fully into such an important subject as the improvement of hardy plants, the capabilities of which are immense, but it is of vital importance that this matter should be taken up to assist in maintaining an interest in hardy plants. It is becoming more difficult every year to find novelties, and it is new or rare plants that the public want. It is surprising how little has been done in this direction. Some families, it is true, have been thoroughly dealt with, and these now form some of the chief attractions to the gardens of the present day, but how few have received the attention they deserve!

It is unfortunate that nurserymen as a rule have so little time to devote to this important matter. The older they get the more they have to do, and before they have accomplished one tithe the part of their early intentions they find their energies directed to other phases of horticulture. What a vast field there is still for enterprising men to take up hardy plants and improve them by hybridising and selection! What an opportunity many of our gardeners have for this kind of interesting work! They have the materials and opportunities, and in hundreds of cases nothing would please their employers more than to know that their gardens were the birthplace of numbers of plants which sooner or later would find their way into every garden in the land. There is also a vast field open for men fond of mountaineering; but this class of enthusiast is difficult to find, because a young man has not the knowledge to detect a new plant the moment he sees it, while the middle-aged man, having the knowledge, has not always the energy necessary to take a trip of two or three days' duration in the mountains, carrying all the paraphernalia required for climbing, and knowing there is no luxurious hotel in which he can recuperate for the return journey.

In one of my trips to the Pyrenees, in 1870, I was successful in finding many interesting plants, some of which are now common, while other have, unfortunately, been lost—*Ramondia pyrenaica alba*, *Primula integrifolia alba*, *Gentiana verna alba*, and a solitary double-flowering variety, which never survived the journey, *Anthericum Liliastrum major*—not the major now offered, but one growing 3½ft with very large flowers

\* Improvements in Hardy Plants, a paper read by Mr. Amos Perry, of Winchmore Hill, London, N., before the Horticultural Club.

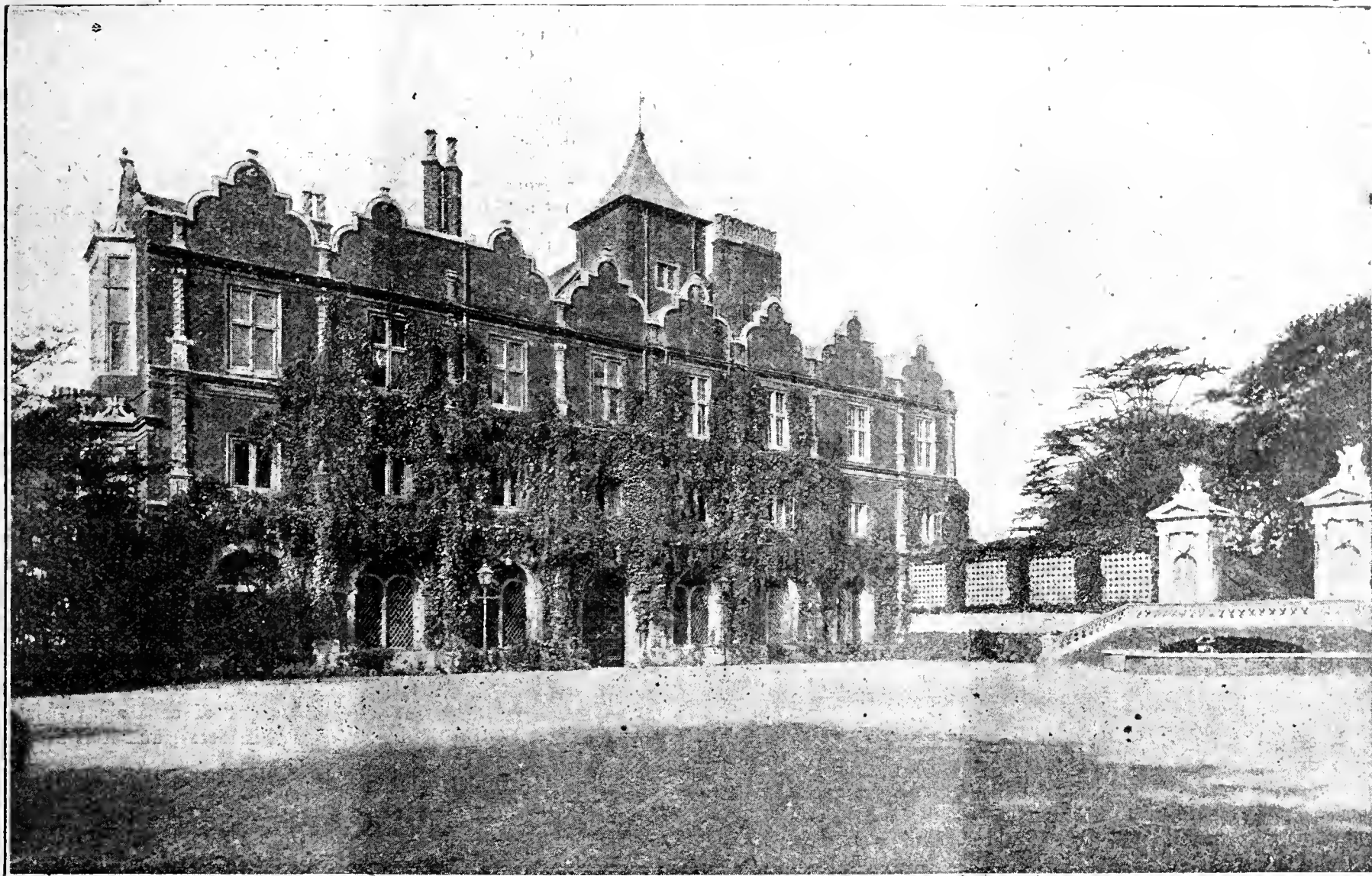


—and many others. I am afraid we must fall back upon the amateur for the raising of seedlings, selection, hybridising, &c., and if we can only induce more enterprising amateurs to take up this matter no one knows what may be accomplished. Secretaries might greatly assist in the work by offering prizes for any improved variety of hardy perennial, and honouring them according to their merits.

We want more reverend gentlemen like the late Mr. Nelson, Mr. Ewbank, and Mr. Harpur-Crewe, who did valuable work in their time; the Rev. C. Wolley Dod, Sir Michael Foster, who has done so much for the Iris; Mr. James Salter, the developer of the Pyrethrum, and many others. Some families have received a fair share of attention, and to the French florists we are principally indebted for the great improvement in the Phlox, which is still capable of further additions. Many of them are too tall, and the Americans have just started a new race only growing 1ft in height, which for many purposes will be invaluable. The alpine Phloxes were taken in hand by the

Messrs. Kelway and Son, but although the results cannot be considered great, yet it is possible that from these may be obtained other varieties of greater merit. The idea seems to prevail that a Delphinium should be blue, and if you admit a white or a yellow into your collection it must be a good one. It is, however, a great achievement to get a break of this description, and now we have white I see no reason why yellows, scarlets, and every other intermediate shade cannot be produced.

The Oriental Poppies deserve mention as being one of the few recent families that has received special attention, and among them are many of great merit and still capable of great improvement. I see no reason why we cannot obtain as much variety, colour, and form as in the annual varieties. In Fringed Beauty we have the first break in form. The flower has a deep fringed edge to the petals, while in Mrs. Marsh we have the first two coloured varieties, and with this material to work from no one can form any conception of what may be obtained. [It may be here noted that at the recent Temple Show Mr.



The East Front of Holland House.

Rev. John Nelson, and to him we are indebted for one or two of the best at present in cultivation.

The Hollyhock is essentially an English flower, and Mr. Chater's name will always be associated with it, but I do not think there is much room for further improvement in that direction. We want a change, and I think the material is at hand in *Althæa fecifolia* for producing an entirely new race of Hollyhocks, dwarfer in growth, of pretty branching habit, and of far more value for many purposes than the present group.

Carnations and Pinks now occupy a prominent place in our gardens, but what a change from the old school of florists, of which the late Mr. Turner was the chief. A Carnation with a fringed edge, in those days, was considered a monstrosity, no matter how free blooming or beautiful in colour, and now we hear of fringed Carnations realising thousands of dollars. In connection with the Carnation we must not forget Mr. Martin Smith, who has done more for this flower than any man living—and an amateur. Long may he continue his work with this family, and set an example to others to try and do likewise with some other race.

Delphiniums have received a fair share of attention, both by English and French raisers, and many splendid varieties have been the result. A remarkable break has been obtained by

W. J. Godfrey staged and received awards for some handsome novelties.—ED.]

The Tritoma has received a good deal of attention, but the work is only half done. T. MacOwani should be taken seriously in hand to endeavour to form a new race of dwarf varieties for summer flowering and adapted for massing as well as for pots. Lobelias, Pentstemons, Dahlias, Chrysanthemums, and others we know all about, but they hardly belong to the class of plant under consideration this evening.

(To be concluded.)

#### Windsor's New Gardens.

The new riverside gardens at Windsor were informally opened on Thursday. By permission of the Queen they are called Alexandra Gardens, and a member of the Royal Family is to perform the official opening ceremony in the course of the next few weeks. £14,000 has been spent on improving the river side, and the gardens have been most prettily laid out.

## NOTES

## &amp; NOTICES

**Royal Horticultural Society.**

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, July 8, in the Drill Hall, Buckingham Gate, Westminster, 1—5 p.m. A lecture on "Ornamental Trees and Shrubs" will be given by the Rt. Hon. the Earl of Annesley.

**Raid on Mushroomers.**

A vigorous campaign against Mushroom gatherers is being carried on in Yorkshire. Besides ordering the payment of costs and damages, the Lowden magistrates have imposed fines ranging from 5s. to 10s. on each offender. The damage done to growing crops is said to have been considerable, and Mushroom gathering to have become an intolerable nuisance.

**Alpine School of Gardening.**

The popularity of the carefully tended Alpine Garden (says the "Daily Mail") is not limited to the British Isles. On the Schneeberg Mountain, in the Styrian Alps, a school garden has been established as a sort of educational medium for school children and the public, who are expected to study the botany of the indigenous plants.

**The Age of Trees.**

The estimation of the age of trees by means of the number of rings visible in the wood is well known to be subject to many exceptions. By pinching, or pruning, or grafting, a second layer of wood may be formed in one year in a shoot. The explanation is that the pinching or other operation brings about a state of rest, and less sap is directed to the wound. But when the adjacent buds begin to grow, the afflux of sap is increased, and a fresh zone of wood is the result.

**Cheap Strawberries.**

The fine weather has greatly improved the prospects of the Strawberry crops. On Saturday at Covent Garden about 70,000lb of Strawberries were received from Southampton alone. In Cheshire and Denbighshire the yield is anticipated to be the heaviest of recent years. A Covent Garden dealer on Saturday said that the long spell of wet had not done the Strawberries any harm; it had only kept the fruit from ripening. The fruit would be cheap again when the full supplies began to arrive.

**Chelsea Physic Garden.**

Except the Botanical Garden at Oxford, whose Linnæan beds were destroyed by the zeal of some reforming Philistine, the Physic Garden at Chelsea is the oldest botanical garden in England. It has chosen the present month to inaugurate its work of larger usefulness as a garden with laboratories of the best kind for the use and instruction of botanical students. Unhappily, the current year has witnessed a loss to the garden which cannot be replaced. Its Cedar tree, the oldest Cedar in England, is dead. The famous Gingko tree is alive, but has been shut out of the garden by the "improvements." But trees are not being treated very well in London this year.

**Royal Scottish Arboricultural Society.**

A general meeting of the Royal Scottish Arboricultural Society is to be held at Edinburgh on July 18 next, under the presidency of the Earl of Mansfield. A considerable amount of business of a varied and interesting character has been placed on the agenda. Special attention is directed to the forestry section of the Highland and Agricultural Society's Show at Aberdeen on July 15 to 18. The show will include a forestry section organised by the Royal Scottish Arboricultural Society, similar to that held at Inverness last year. The hope is expressed that a large number of members will attend the show. An informal meeting of members is to be held in the directors' room in the showyard on Thursday, July 17, at twelve noon, when a discussion will take place on the exhibits, and the best means for improving the section. The local secretaries are Mr. James Wilson, B.Sc., Department of Agriculture, Marischal College, and Mr. John Clark, forester, Haddo House, Aberdeen. The paper also contains an intimation of the annual excursion, which is to be a tour in Sweden.

**Strawberries in Plenty.**

The glorious weather has so improved the prospects of the crop of Strawberries in Cheshire and Denbighshire, that the heaviest yield of recent years is anticipated.

**Nine-leaved Shamrock.**

Finding a nine-leaved "Shamrock," a farm labourer at Groningen, Holland, sent it to Queen Wilhelmina, who accepted the gift and rewarded the donor with £2 1s. 8d.

**Cold Storage Steamers.**

A new line of refrigerator ships, owned by a British-American syndicate, is to be established, with direct service from New Orleans, New York, and Boston, to Bristol, England. The New Orleans line is to carry California fruits.

**World-famed Trees in Peril.**

A great forest fire is raging in the Tuolumne Mountains in California. The famous Tuolumne Grove, which contains some of the largest trees in the world, is threatened with destruction. A number of soldiers and civilians are fighting the fire, but it is doubtful whether they will be able to save more than a portion of the Grove.

**Commemoration Oaks.**

Some of the Colonies will not be without English Commemoration Oaks this year. Last November an Eton tradesman sent a bag of acorns, picked up in Windsor Great Park, to Australia. He has just received a letter from Melbourne in which the writer says: "The little Oaks are doing well. They have several leaves on them now."

**Covent Garden Indignant.**

Many of the retail dealers at Covent Garden are loud in their expressions of indignation at the publicity which the "slump" prices in Covent Garden have gained, as they say it has been spoiling their market. But the wholesalers have little sympathy with the retailers, for they say that in a crisis like that of last week the retailers do nothing to help them out of it, but by keeping up their prices make it all the worse.

**Hull Fruit Trade.**

The Hull fruit trade has suddenly and considerably improved this week, and the merchants are looking forward to a busy season. The improved train service from Paris to Boulogne will make a great difference to Hull traders, inasmuch as delays, sometimes extending to half a day, will be avoided. Fruit is now carried across France in special ventilated trucks, and shipowners are making provision to preserve its freshness in transit over sea. The Goole steamer Mopsa, for instance, which has begun its regular sailings to Boulogne, is provided with a novel apparatus which keeps its deck cargo in a current of cold air. This experiment has awakened a good deal of interest, and it is likely to be extended.

**The Blue Rose.**

A story has gone abroad again regarding an impossible blue Rose. The facts of the case are that a Mr. Donald, a Scottish gardener, who has been for seventeen years in the United States of America, recently brought over a sturdy plant (a Wichuriana-Rambler cross), hoping to have it in flower for the Rose Conference held last week at Kensington. On board ship he may have jocularly remarked that the novelty was "a blue Rose," and a journalist being at hand, gave the story wings. The plant was safely housed in the stove at Chiswick, having been cared for in a special Wardian case during its voyage, but even with the warmth of the hothouse, the buds were not expanded sufficiently to show the floral characters. The N.R.S. folks may see this new American visitor.

**Our Fruit Imports.**

The following little table shows the quantities of certain fruits imported into the United Kingdom in the week ended June 21, 1902, together with the quantities in the corresponding week of the previous year:—

| Fruit, Raw.          |            | 1901   | 1902   |
|----------------------|------------|--------|--------|
| Apples               | cwt...     | 1,053  | 216    |
| Apricots and Peaches | cwt...     | 615    | 330    |
| Bananas              | bunches... | 31,803 | 48,162 |
| Cherries             | cwt...     | 45,427 | 12,220 |
| Currants             | cwt...     | 185    | 500    |
| Gooseberries         | cwt...     | 5,302  | 4,833  |
| Grapes               | cwt...     | 185    | 267    |
| Lemons               | cwt...     | 42,749 | 13,688 |
| Oranges              | cwt...     | 23,121 | 71,507 |
| Pears                | cwt...     | 961    | 50     |
| Plums                | cwt...     | —      | 50     |
| Strawberries         | cwt...     | 8,014  | 7,111  |
| Unenumerated         | cwt...     | 2,247  | 8.3    |





### The Story of the Blue Rose.

Apropos of the blue Rose (a correspondent writes), my little girl, to whom I read the item, proceeded to tell me the following pretty legend: "There was a man who lived in Antwerp. His name was Quintin, and he was very poor, but he was very clever and nice. He was in love with a very dear girl named Elsa, who was the daughter of a very rich man who was the mayor (only they called him some other name). The mayor was very angry with them, and when Quintin went to see him and said he was going to give up being a blacksmith, and become a great painter and be very rich, the mayor only laughed. He said, 'When you can paint blue Roses and red Lilies from life, then you can marry Elsa; but not till then.' So poor Quintin went away very unhappy, because he knew there were no blue Roses or red Lilies."

### Profitable Apples of Upright Growth.

I am much obliged to "H. D." for his answer to my inquiry. It is highly satisfactory to learn that Lord Derby is, as I hoped from the appearance of my young bushes, of upright habit as a standard, because, of all the culinary varieties I am trying, I place it first for my land. I also much like the appearance of Lord Grosvenor, and should be glad to know if it is of upright habit as a standard; the same as to Bramley's Seedling. Warner's King will suit me well for one variety. I am sorry to have to omit Cox's Orange among dessert varieties, and doubt whether Allington Pippin will be in demand as a market variety. Am I right in concluding that Duchess of Oldenburg and Potts's Seedling are both upright? Is Beauty of Bath?—BEGINNER.

### The Crooked Spade.

Apropos of Mr. W. R. Raillem's notes on "The Cornish Spade" (page 533, last volume), the following from an old descriptive book relating to Scotland, mention a crooked spade as being used in Skye. "Two miles further on," says the itinerary, "is Monkstadt House, the residence of Hugh MacDonald, Esq., one of the most extensive farmers in Skye. The fertile valley extending to the north of the house is the bed of a lake which has recently been drained, the ground thus acquired being cultivated with the crooked spade peculiar to the agriculture of Skye." The reasons given for the employment of these long-handled and peculiarly shaped spades are that both the Cornishmen and the Scottish Highlanders at a recent period used to work barefooted and could not tread the spade in the usual manner.—J. H. D.

### Standard Outdoor Peaches and Nectarines.

On the inspection of an article that appeared in your columns some time ago, describing the success of Mr. Turner, of Slough, and, I think, Messrs. Veitch, in growing Peaches and Nectarines as standards out of doors, I planted six Peaches and five Nectarines in the autumn of 1900. They grew well, and, last summer, ripened a good lot of young wood. This year they were covered with very fine and fully expanded blossom, which stayed on the trees a long time. In this southern district we had no more than 3deg of frost (3ft from the ground) on any night after the blossom was out, and then the trees were well covered with tiffany. Yet not a single fruit has set. What can be the reason? Could it be the high and cold winds? I am on a hill, and get a great deal of wind from the south-west. A bank protects the trees from the north-east, but not from the east. We have hives of bees in the garden; but the bees were busy on the few sunny days on Gooseberries, Currants, Wall-flowers—anything but the Peaches and Nectarines. Therefore I tried inoculation with a camel-hair brush, when the sun shone; but hardly any pollen showed on the brush at any time, and often I could not see any at all. The trees suffered very badly from leaf blister; but this, I imagine, did not prevent the fruit from setting. They are six to eight feet high, and well furnished with branches. The soil is somewhat heavy, but not wet, as it is on a steep slope, and a drain runs nearly parallel to the row of trees, and only a rod from them. The result is most disappointing. Can I do anything to insure success with the trees?—SOUTH SUSSEX.

### Grape Gros Maroc.

Under the above heading, and ever the initials "R. M.," a question appeared in your pages about a year ago as to whether this variety was worth growing, as it had failed to give satisfactory results here, Marlay, Rathfarnham. To my inquiry several of your correspondents very kindly replied giving advice as to the proper treatment which it should receive, and having carried out their advice, it is with much pleasure I tell it that the Vines of this variety in most cases had a surplus of bunches this season. Some of them are carrying a heavy crop.—R. M.

### The Bothy.

A good deal has of late appeared regarding the above subject in your pages, one writer being in favour of doing away with it. I think if a poll were taken as regards the wishes of young gardeners of to-day that a great majority would be in favour of the bothy. One question which has a great deal to do with this subject is the position which those of us who are head gardeners take in reference to it. Are we doing our duty? Do we know that the bothy is not as it should be, and are we taking no steps to remedy it? We are, as a rule, most anxious as to the characters of the young men whom we engage to live in such places, and if they be unfit for habitation, and if we have made no efforts to get them put right, surely the blame rests upon us. It may be that some employers may object to incurring any expense, yet if we have right on our side, let us take courage and go forward again—in the end right will prevail. One failing, which I trust is not a general one, is that many of our young men do not apply themselves to reading as they should. This is one of the many ways in which a good example is likely to bear fruit in time. If the books be few let them be good. It is with feelings of deep gratitude to my present employers that I have been enabled to do a little to brighten the lot of the young men here. It would answer no good purpose to recall the state of things as they appeared to me when taking over charge of these gardens.—ROBERT RUSSELL, Co. Dublin.

### The Wages of Gardeners.

A correspondent to the "Florists' Exchange" writes:—  
"Some time ago in reading the interesting and instructive articles from the able pen of Joseph Meehan, I noticed a few words in regard to the wages of gardeners in comparison with those paid in other trades and professions. I was pleased to see the subject taken up by one of such experience and reputation, and have been expecting someone else to give their views on the matter."

"Does the profession of horticulture require less brains, study, and hard work than other trades and professions? One who intends to become a successful horticulturist will find that it takes ceaseless study, a close and strict attention to business, plenty of hard work, combined with the bump of patience well developed. We have longer hours requiring more watchfulness and care than most trades. Why, then, should not a gardener get wages that would compare with the wages of skilled help in other trades? How often do we see in the trade papers ads. worded thus: 'Wanted, young man with experience in growing Roses, Carnations, Chrysanthemums, Violets, &c., sober and honest, not afraid of work; wages 25 dols. per month and board,' which is just a little more than some men pay labourers that work nine and ten hours per day; and the gardener will be working as long as there is daylight (if he is foolish enough to do so), with a room in the potting shed, or a cot minus the room."

"A great number of our prominent and successful growers pay fair wages, and one can soon detect the difference between their establishments and the place that has insufficient and poorly paid help. One is all bustle and everyone doing his utmost to raise the best stock possible; everything is clean and neat. The other is dirty and untidy, stock poor, the help loafing and more interested in somebody's best girl, or a prize fight, or something more exciting than their occupation."

"I think it would be a benefit, both to employers and employes, who have the best interest of the profession at heart, to form some kind of protective association, and only admit to it applicants having good references, so as to protect both those looking for good help and men looking for good situations. Men looking for positions have to furnish good references, and then often find, especially if seeking a position at a distance, that the place has been mis-represented, the employe often having a hard time to get his wages when due. Surely some way should be devised to guard against such cases. I hope to hear others' views on this subject; and that someone will think of a plan to benefit all.—ARTHUR TAYLOR."



### New Roses.

The most striking fact in regard to novelties in Roses is that we now look to home raisers for improvements. A few years back it was the custom of a considerable number of Continental growers to send over rather lengthy lists of new Roses, which on trial did not, in the great majority of cases, include over many kinds which proved satisfactory. Of course, one must not forget what such raisers of France as Lacharme and Guillot have given us, and our exhibitions and gardens would miss such beauties as Charles Lefebvre, Catherine Mermet, and La France; yet it can hardly be said that our clever neighbours have produced more than one superlatively beautiful Rose (Maman Cochet) during the past decade.

Within that period what strides have been made! Indeed, it is not too much to state that Rose-growing has been revolutionised with the introduction of such large, shapely, and giant-petalled sorts as Mrs. W. J. Grant, Bessie Brown, and Mildred Grant. One has only to carefully scan the stands of our leading exhibitors to conclude that their resources are even not yet exhausted. Last season we noted from

#### B. R. Cant & Sons

*Ben Cant*, a new flower of splendid qualities. It belongs to the Hybrid Perpetual class, and to us appears the most valuable addition to dark-coloured Roses that has been obtained for some years. The colour is a rich, deep, velvety crimson, not unlike the shade found in Victor Hugo. Its petals are big, thick, and lasting, and the shape of the flower most elegant, showing the inner surface to perfection. The growth of the plant is stout and vigorous, an improvement on the above-named variety it mostly resembles. This Rose should be esteemed by exhibitors who have to complain of a want of really first-class dark show Roses, and it is one that will help to recall the memory of a champion Rose grower for many years to come.

*Mrs. B. R. Cant*.—This is not so much a Rose for show as it is a sort that will please everyone; free blooming as well as continuous, nice colour, and charming shape. It is hardy and sweet-scented. The shade is a deep rose, and in autumn quite a red tint is put on. The form is globular and attractive, both of flower and foliage. Vigorous and branching to a degree, it is just the Rose to plant in masses to cut and come again.

#### Frank Cant & Co.

*Lady Roberts*.—This firm is fortunate in producing such a charming kind. It is a variety of exquisite shades of colour. Buff with lively tints of red would describe it, but not perfectly, because it is impossible to take in the varying hues in a few words. Petals large, shape deep and pointed to the centre, it is a form which most appeals to Rose lovers. To those who know that lovely tea-scented kind, Anna Olivier, at its best, it may be termed a deeper coloured type. It certainly seems to be a sport from this Rose, or, at any rate, if a seedling (as I am told it is), the general characters of the parent are retained in a greater degree than mostly found in Rose progeny. However, Lady Roberts is a strikingly fine new Rose; one that should be added to the choicest collections, for it will help to win prizes for as well as give pleasure to the grower.

#### Alex. Dickson & Sons.

These eminent growers are responsible, as usual, for some choice new things. They appear to monopolise that grand race of Roses, the Hybrid Teas, so rich in qualities as handsome blooms, free and continuous in flowering, and markedly beautiful foliage. The class is as yet comparatively young, and the colours range principally in shades of pink, blush, white, or rose. Perhaps in the near future these successful hybridists will produce varieties with rich red and maroon shades. Fancy Roses with the petals or "wings" of Mrs. W. J. Grant and Mildred Grant, bearing the colours of, say, Captain Hayward and Xavier Olibo!

*Duchess of Portland*.—This is a lovely bloom, of a sulphur yellow shade, large, full, and of perfectly symmetrical form, with grand petals of a thick, smooth texture. The habit of growth makes it desirable as a garden Rose, and a constant kind for pot-culture or exhibition.

*Lady Moyra Beauchere* is, like the last-named, a Hybrid Tea, and the flower has great beauty. Its colour is a bright shade of rose with silvery reflex, the form circular with high-pointed centre. It is large, full, and massive looking. Growth vigorous and branching, and a sort that we should imagine will make a good pot Rose.

*Mildred Grant*.—The Rose is admittedly the Queen of Flowers, and this variety is to my mind the Queen of Roses, as no kind

yet seen, in public at least, is so majestic of look. In size and thickness of petal it is without an equal, and in size too; in form not surpassed by any. If I were asked to find some fault with it I would say the colour is just a bit wanting. A green tint we sometimes see in light-coloured Roses, notably in The Bride and sometimes in the outer petals of Kaiserin Augusta Victoria, is noticeable in this Rose; still, it is magnificent. Colour, white, with a pale rosy tinge. Its wonderful petals on the outer part of the bloom fall back, and the inner ones fold to a perfect high-pointed centre, making it an exhibition Rose of the first order. Seen growing, the foliage is distinct and the stem stout, the blooms requiring no support.

#### Paul & Son.

The attention of this firm, which has introduced many fine kinds of Roses, seems recently to be centred in the production of charming single and other types of decorative, rather than strictly show Roses. *Psyche*, a rambling Rose, and *Una*, a single-flowering variety of recent raising, are two types which have fine qualities to recommend them.

*Purple East* is distinct in colouring—carmine with purple shade—and produces in abundance semi-double blooms about 3in across.

*The Lion*.—This is a single Rose, bearing striking blossoms of a rich crimson shade. The vigorous habit of the plant makes it desirable for garden decoration.

*The Wallflower*.—The attractive shade of crimson in this new Rose is much admired. It is esteemed, too, as a wall Rose, or a variety to cover space quickly on account of an exceptionally vigorous habit. Those who like the well-known Crimson Rambler (and who does not?) will welcome the newer kind.

*Lady Battersea*.—A Rose which partakes of the China class because of its exceeding freedom in flowering. The colour is a bright cherry-red. In form the flowers are long and pointed, although not over-large. Vigorous and branching in habit, it will make a capital Rose for pot culture, as well as being one of the choicest introductions for bedding or planting in a mass.

#### Wm. Paul & Son.

The Waltham Cross growers have either raised or brought into cultivation a great number of esteemed Roses. Their more recent novelties run more on the lines of attractive garden Roses rather than exhibition sorts. One exception, however, is *Boadicea*. This is a tea-scented variety of some merit. Besides its exquisite colouring—shades of peach and violet—it has excellent form; quite a style that will be welcomed by exhibitors, and as it has size also one may with confidence recommend it.

*Empress Alexandra of Russia*.—Salmon with bronzy shades of red would describe the tints of the colouring of this distinct and attractive Rose. Sometimes the blooms come large enough for show, but are not lasting. It is one, however, that invariably creates a liking when first seen, and is a charming garden kind.

*Morning Glow* is a big-petalled flower with very distinct colouring. Fawn and red in varying shades predominate.

*The Alexandra*.—This again is most attractive in its combination of hues—deep yellow and bronze. *Salmonea* is yet another distinct and pleasing Rose for garden decoration. The colours are red and salmon, this last shade appearing in the centre of the flower.

#### Robt. Scott & Son.

*Robert Scott* is an American novelty—a Hybrid Tea not unlike Mrs. W. J. Grant with light shades. Flesh-coloured pink is the colour, and the bloom large, full, and quite up to exhibition standard.

#### J. Wood.

*England's Glory*.—This Rose was raised in our neighbourhood (Woking), and introduced this spring. It is the result of a cross between Gloire de Dijon and Mrs. W. J. Grant, having the colour, or rather lighter shade of the latter with an improved form of the former. Those who know Grace Darling may form an idea of the new-comer. It is, however, of better shape, stronger in growth, and very free flowering. It will become a valuable Rose for forcing under glass. The shape is always good, either in small buds or open blooms. Pity it is that this novelty has not been exhibited, but Mr. Wood, who had something to do with such Roses as Mrs. John Laing and Her Majesty before the Rose public saw them, should know what a good flower is.

#### Treseder

Mrs. Stephen Treseder is an exact counterpart of that fine Tea Rose Anna Olivier, only lighter in colour. Lady Roberts (the darker) and Mrs. Treseder (the lighter) are two valuable additions to this charming type. Free and of good growth in the garden and first-rate for exhibition, they make excellent pot sorts, and are well adapted for forcing into early bloom.

#### J. Veitch & Sons, Ltd.

*Queen Alexandra*.—This free-flowering Rose rivals the Crimson Rambler in its rampant growth and huge clusters of miniature flowers. The colour is a bright shade of pink, most distinct and pleasing. It was much admired at the Temple Rose Show last year, and will doubtless be seen in many decorations of Roses this season.—H. S.



## Gadding and Gathering.

"HERE AWA', THERE AWA'."

### Floral Designs.

Frequently the most simple selections of colour and arrangement of forms in flowers and plants, produce an exceptionally beautiful result. Such was at once apparent in the case of a floral cross seen in Gerards, of Regent Street, London, last week, where the only flowers employed were bright purple *Violas* with a yellow eye, without any greenery whatever, and only a relieving bunch of *Caladium argyrites*' leaves. The flowers were

and ought to be), and consisted of *Lilium longiflorum*, wired, with sprays of *Odontoglossum crispum* and long, graceful fronds of *Nephrolepis* shooting out beyond all. Supporting the bouquet I noticed handsome and typical leaves of *Ficus elastica variegata*, whose colour harmonised with that of the yellow-spotted *Aucuba*.

A second wreath consisted of white Pinks on the frame, with no fringe of greenery. This is a point worth noticing. None of the wreaths have any fringe whatever, and they are not generally one-sided articles—for the flowers form a complete covering on all parts of the frame. A finished wreath then is like a life-belt, only that it is not flat-sided. In this wreath the bouquet attached to it was composed first of *Stephanotis* flowers, each separately wired, some made to protrude outwardly from the



Holland House from the West.

all wired, the stalks being inserted among the moss binding of the framework. Thus their faces were flat and turned outward to the gaze of the many admiring pedestrians. The whole surface of the frame was covered with rows of the *Violas* all evenly woven in. The wired *argyrites* leaves were bunched at the intersecting point of the cross-piece, and each was held out over the *Violas*. In height the cross may have been 3½ ft and 1½ ft broad.

Another beautiful feature, in the same window was a large wreath, the frame being hidden by finely spotted *Aucuba* leaves most effectively arranged. The edges of the leaves had been folded inwardly, and were thus fluted. Each had then been evenly disposed against its neighbour, and formed a circle of unerring exactness, the fluted leaves following and fitting one another like the scales of a fish. The bunch of flowers placed on the wreath in this case was loosely composed (as they always are

centre of the bouquet, others kept back. Then at the lower half of the arrangement were beautiful sprays of *Lily of the Valley*, and above all, though so ably disposed that their size did not detract as they would have done by clumsy manipulation, were flowers of *Lilium speciosum album*.

Lastly, there was a basket formed of plaited straw and thin bamboos, and coloured light "sharnie-green." The sides were not deep; they were straight, and the bottom flat. The prevailing colour was yellow in the arrangement. Thus yellow *Richardias* were used along with yellow English *Irises*, yellow-leaved *Crotons*, and a great and loosely set bunch of William Allan Richardson *Roses* at the right-hand front corner. Towering up at the back, and giving balance to the whole, was *Hydrangea paniculata*, dense in structure, and beautifully white. A huge bow of golden-orange coloured satin ribbon, half a foot in breadth, was fastened by some means toward the centre of the

flowers and plants inside the basket, and another similar bow was effectively attached near the left-hand bottom corner, outside the basket. These London florists of first rank always bring broad ribbon bows to their aid; and the colour of the bows always harmonises as closely as possible to that of the flowers.

#### Displays at Regent's Park.

In their endeavours to stimulate attention to their gardens, the council of the Royal Botanic Society of London have secured the presence at Regent's Park of Messrs. Barr and Sons, who are exhibiting hardy cut flowers and Japanese pigmy trees in the corridor of the Society's garden, and Messrs. John Waterer and Son, Limited, of the American Nurseries, Bagshot, are now holding their annual and much admired display of Rhododendrons under canvas in the open ground. Both displays are interesting, though naturally the splendour of the Rhododendrons eclipsed the brilliance of the humbler border flowers. Taking Messrs. Barr's display first, one cannot omit at least to mention the Japanese pigmy trees which for three years now have engaged such considerable attention by the ladies of London society. And the latest lay newspaper reports tell how the craze has extended to Paris, which is surely a reversion of the proper order of events, the Gay Capital usually being the forerunner in matters fashionable. Frequently the *Journal of Horticulture* has printed paragraphs detailing the price of Japanese pigmy trees as sold at auction—prices which range from two guineas up to twenty-two guineas and beyond. Larches, Pines, Junipers, Cupressus, Japanese Maples, and other genera are mostly the kinds on view, and all of them are in fancy vases or pans. Messrs. Barr's collection of hardy flowers was rich in Bearded and Spanish Irises, amongst the former being varieties of *I. squalens*, *I. pallida*, and *I. variegata*. Thus if those who have not the privilege to visit a good Iris collection, and they will rely on our judgment, the following would be our commended selection: *I. pallida* Leonidas, with lavender falls and purplish standards; *I. p. rubella*, purplish-violet; *I. neglecta* Hannibal, blue; *I. variegata* Louis Meyer, dark violet falls, yellow standards; *Iris germanica* Mrs. G. Darwin, a beautiful ivory-white with satiny-sheen; *I. variegata* Gracchus, violet falls, rich yellow standards; *I. neglecta* amabilis, lavender-violet standards and purplish falls; *I. delicata*, lavender; together with *squalens* Dr. Bernice and *variegata* Hector, both of them richly coloured.

Amongst the Spanish Irises the variety Thunderbolt stood out most prominently, the others being less known to us. The great scarlet flowers of the Oriental Poppy were much in evidence, and the noble Delphiniums, in colours blue, purple, and violet, were most magnificent.

Iceland Poppies are now in season, and these formed no small part of the exhibit. And the delicate beauty of the Lady's Slipper Orchid—*Cypripedium calceolus*—and the still finer *C. spectabile* or Mocassin Flower, obtained much admiration. These are charming subjects for the bog garden. *Lilium giganteum*, noblest of its race, was shown in huge pots, but is not in flower. *Ixias* in a great variety of uncommonly lovely tints were also included, and I can only repeat the recommendations formerly given, to the effect that these bulbous plants succeed admirably on open, sunny borders, and their more liberal planting in the open air should be seriously considered by lovers of choice hardy flowers.

Single and double Pæonies afforded a feast of the most pleasing colour harmonies. What at this season is there prettier or, indeed, handsomer than the single-flowered mauve-pink Pæony Beatrice? Many others were there, and all were good. *Genista Andreanus* is much cultivated indoors in pots, but it succeeds as well as the common Broom when grown entirely in the open air. The red and white forms of *Dictamnus Fraxinella* here and there in the group added to its interest and effectiveness.

#### Waterer's Rhododendrons.

Messrs. Waterer and Sons' display included some scores of large Rhododendrons in full bloom, and planted in circular and crescent shaped beds and borders. Here and there the grass margin ran out to a point, and was made use of for a standard Rhododendron. In such positions we found the splendid variety named Lady Eleanor Cathcart densely clustered with its deep rosy-cerise flowers. Then Sappho, which was recently figured in our pages, stood forth conspicuously from amid a host of other very good competitors. This variety is white, darkly blotched with deep purple on the upper segments. The loveliest of all, and seemingly very vigorous in growth as well, was the new Pink Pearl, a variety which *Journal* readers have also had the opportunity of seeing by illustration. The flowers are individually immense, and larger clusters of bloom have never been seen on any hardy Rhododendron.

To name a number of the sorts of greater excellence one must include the showy John Walter, with deep yet glowing crimson cerise flowers with wavy edges. *R. concessum* has moderately sized trusses of well-shaped flowers with a peach centre and rosy edge; very showy. J. H. Agnew, though not quite so intense as John Walter, yet very closely resembles it. *Gloriosum* is peachy

lilac coloured, and seems to be exceedingly floriferous. *Perispicum* is paler and not so taking as the last named; but Marchioness of Lansdowne should certainly not be overlooked. The mass of pretty flowers reminded me of *Dendrobium nobile* when at its best, though of course the Rhododendron was far larger in character. It is a showy and beautiful variety. *Mum* is nearly white, but with yellowish upper segments. Then Michael Waterer (all the Waterers are good) is a rich deep crimson with black spots on the upper segments. Princess Mary of Cambridge possesses finely built conical trusses, and is bold and showy. The centre is white, broadly edged with deep purplish mauve. Helen Waterer, with small but neat trusses, has a light centre and deep, rich crimson edge.

Strategist furnishes a good red—a brilliant rosy-cerise, and has large conical flowers. Mrs. Tom Agnew one always loves—it is so distinctive: colour, white, with yellow on the upper and inner part of the throat. *Everstianum* follows the colour of *R. ponticum*, so thoroughly well known, but the trusses are more magnificent. And, lastly, there is Lady Hillingdon, with enormously large inflorescences, each finely built. The colour is a delicate peach (the hue of the Peach flowers), with greenish yellow shading on the upper segments. The foregoing list may not have comprised all the choicer sorts, but it certainly represents varieties of unchallengeable merit. A group of *Kalmias* in flower greatly assisted the general exhibition.

The Society's gardens themselves had little to interest the visitor, as bedding had only been completed, and so few subjects were in flower in the open. Within the Lily house the *Victoria Regia* furnished the chief object of interest, and a fine healthy plant it is, with one large flower.

#### Mill Hill District.

A pastoral and grazing district, and splendidly wooded in every part, though rather hilly in places, is the district around Mill Hill, which one reaches on the way to Elstree on the Midland Railway. It is only a few miles from the City of London, and furnishes a rural haunt for a considerable number of holiday trippers. It is from the fresh green pastures and the umbrageous groves that much of the London milk supply is drawn. I looked from the eminence by Mill Hill School (a large and beautiful building for middle-class boys), out over hundreds of acres of undulating meadows and grassy slopes, all hedged over and dotted about with Oaks, Elms, and Beeches, and never a rood of arable land met my eyes. Mill Hill itself is a straggling village, which seems, indeed, to cover the entire parish! New highways and new villas are being largely made, the place being healthy, interesting, and within easy reach of London. It is here that the Member of Parliament for Hertfordshire—Mr. Cox—resides, and his mansion commands a beautifully varied prospect stretching over the valley southward to Harrow-on-the-Hill and away beyond to the hazy horizon.

Moat Mount, the name of the estate, possesses a garden that could not but be charming on such a naturally favoured spot. Unfortunately, however, the Parliamentary duties of the owner demand so much of his thought that his garden, which should afford recreation, is little appreciated, and it happens that the splendid features are not developed. The glass houses are in creditable condition, and Mr. W. Ferris, the head gardener, evidently brings much skill to bear on his vineries, peacheries, and orchard houses, judging from the fruitful and vigorous state of the occupants of them. Tomatoes, Cucumbers, Melons, Carnations, *Streptocarpus*, and stove plants are each exceedingly well grown. The houses are situated in a sheltered spot half way down the slope which falls from the mansion and continues to a valley below. They are surrounded on three sides by smooth grassy slopes, on which are beds of shrubs and plants. The *Sequoia gigantea* flourishes handsomely all over the estate, and so does the Redwood, *S. sempervirens*. *Araucaria imbricata* is another exotic tree whose proportions and general aspect augur well for the amenable conditions obtaining. The deciduous Cypress, *Taxodium distichum*, appears perfectly at home on the damp, mossy slopes, and was seen abundantly surrounded by great towering masses of the common and named Rhododendrons in full floral array. Add to these darker trees the beautiful grey trunks of graceful Beech trees, with handsome Elms, Tulip Trees, drooping Birches with silvery bark, purple Beeches, and giant Horse Chestnuts, and the scene must be recognised as one of uncommon diversity and charm.

Woodland walks abound, and pathways through the surrounding meads are not a-wanting. Here, too are water pools for fishing and boating, and where aquatic plants are husbanded. Passing through a colony of Roses and old-fashioned flowers, the higher grounds are scaled, and the parterre around Moat Mount appears. But there is no need for formal flower gardening here—the bold sweep of the lawn with its specimen trees and supporting belts of shrubbery back on either side, are beautiful in their simplicity. The house itself is dignified, though perhaps not handsome. And so we pass out along the winding avenue with its tall Bay hedge, its tasteful flower beds on grass, to the lanes outside the gates and the steep hills that lie around on all sides.—WANDERING WILLIE.



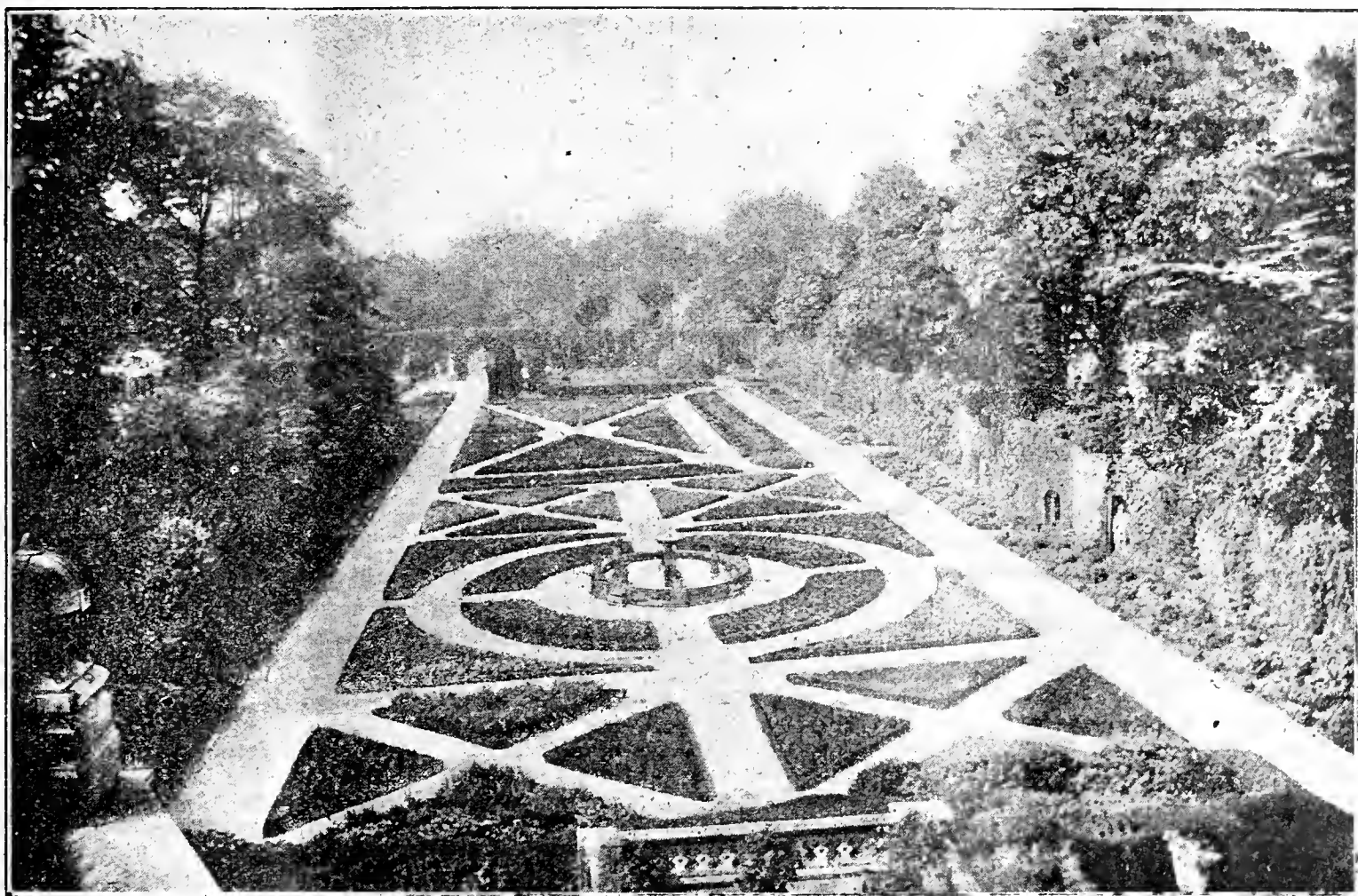
## Notes from Ireland.

June, with its expectant sultriness, is another instance of "hope deferred." The dawn brought rain in abundance with very cold evenings; in fact, they were wintry in the extreme, and rain is still the prevailing feature. The low temperatures have had a retarding effect on vegetation, especially on the Queen of Flowers, and the outlook for our summer displays is by no means pleasant, especially for the shows, or the weather will require a nice modifying if our rosarians are to make a gallant display. Carnations likewise show the depressing effect of the unkindly introduction to what should be summer.

Of the many hardy alpine flowers the *Ramondias*, with their bold, if not massive, foliage and their very free habit of flowering should entitle them to a place wherever alpine are grown. They are natives of the Pyrenees, and are also found in Thessaly. Although the list of available varieties is really limited—comprising in all about four, each of which should find a place in a pocket on your rockery—the following are available

Eagle. The fruits were extra large, of a rich golden hue, specked with the bright rose—an indication of ripeness—the flesh being firm, pleasantly flavoured, and very juicy. The tree was carrying a very heavy crop, and Mr. O'Kelly, his affable gardener, found it an indispensable variety. Indeed he finds no other variety equal to the strain of producing such a crop yearly. Certainly to those requiring Peaches for early work, considering cropping power and individual size of fruit, it recommends itself. I intend forwarding you a photograph of a branch from this tree; but owing to the low spanned nature of the house it is impossible to send a photograph of the whole tree. However, the ordinary branch will enable those who wish to see its fruit-producing capacity as grown at Dartrey.

Amongst the many good things unfolding their floral beauty the ubiquitous *Vittadenia triloba* should not be overlooked. Like the majority of plants, it has undergone the process of rebaptism, being no longer known as *Vittadenia*, but as *Erigeron mucronatus*. Its abundant Daisy-shaped flowers and fine lanceolate leaves render it an attractive plant. The flowers, when bursting, are deeply tinged with a purplish hue, but as they advance to maturity they lose this, leaving a zone of white



The Dutch Garden, Holland House.

for culture; *Ramondia Nathaliae*, which, either for growing on a wall or in a pot, makes a charming plant, and the blue flowers stand erect, the flower stalk about 4in high, and the flower is coloured a shade between purple and blue; if grown in a pot and cultivated in a cool greenhouse its period of flowering is much earlier and equally floriferous. There is also *R. pyrenaica*. This is very frequently described as *Verbascum Myconi*. It is a deep blue-coloured species, at present expanding its flowers in profusion, and has a variety named *alba*, which is not so frequently found in alpine collections. It is equally desirable, however, as it has all the good qualities of *R. pyrenaica*. The yellow-flowered *R. serbica*, hailing from Thessalonian shores, is equally desirable. This species has a doubtful advantage in being the possessor of a dual name, its synonym being *Jankaea Heildreichii*. If one were to see the *Ramondias* prior to flowering their foliage would suggest an experiment to acclimatise a *Streptocarpus*, and they are, indeed, closely allied to that genus. The foliage is nearly identical. The *Ramondias* are easily raised from seed in a compost of sandy loam with a seasoning of peat, whilst divisions of the crowns in spring will ensure a stock.

Early Peaches are always welcome, and for the gardener to be able to gather fruits by the first week in June without undue forcing is something to be proud of. On a recent visit to the gardens of W. Murphy, Esq., Dartry, Palmerston Park, I noticed a fine crop ready for use, the variety favoured being Golden

petals with a faded yellow disc. The plant is a native of Australia.

Amongst our borders the free flowering *Erinus alpinus* always does well, bedecking the rocky edges of its home with abundant bloom. It seemingly is indifferent to locality so long as one permits the roots to permeate a sandy loam. Like the pretty *Ramondia*, it likewise claims a home amongst the fastnesses of the Pyrenees.

The Japanese climber, *Wistaria chinensis*, is unfolding its pendulous racemes. Its lively lavender-blue colour lately showed to advantage at the Botanic Gardens attached to Trinity College. The view included *Cordylines* and other foliage plants, a fine clump of that yellow May-flowering Tulip Mrs. Moon, behind which was the *Wistaria*, flinging the gauntlet to the painter to depict the varying shades. At Glasnevin the *Victoria regia* is at present growing freely. Several leaves are forming, but owing to the want of adequate space those fine leaves, although necessary, must shortly be severed. [Last year the plant which is looked to as an annual feature in the Royal Gardens at Kew succumbed, and at present the plant intended to fill the great tank this summer is smitten like its predecessor, and many of the leaves are entirely spoilt by numerous holes in them.—Ed.] The pretty little Water Bean, one of the *Nelumbiums* is flowering freely in the lake, its white-fringed petals tossed to and fro on the wind, causing eddies.—A. O'NEILL.



## Old-time Gardening.

(Continued from page 517.)

It is now proper that a most remarkable book on rural and domestic economy should receive some attention. I refer to Tusser's "Five Hundred Points of Husbandry," &c., and as gardening is not largely treated of till the edition of 1573, I shall confine the remarks to be made entirely to that. Fuller truly says of Tusser that he "was successively a musician, schoolmaster, servingman, husbandman, grazier, poet, more skilful in all than thriving in any vocation—whether he bought or sold he lost." Yet his books are crammed with advice of the shrewdest, interspersed with the fullest details of the various aspects of country life as led by the better-class farmer in some of the southern and eastern counties.

Probably the most valuable portion of the book, from the horticultural standpoint, are the lists of fruits, vegetables, and flowers considered necessary by our author. In the January abstract the following list of fruits is given:—"Apple trees of all sorts, Apricokes, cherberies, bollese (bullace) black and white, Cherries, red and black, Chestnuts, Cornet Plums (perhaps a misprint, for 'cornel,' *Cornus mas*), Damisens (Damsons) white and black, Filberts red and white, Gooseberries, Grapes white and red, grene or grass Plums, Hurtelberries (*Vaccinium vitis-idaea*, Medlars, Ormerles, Mulberries, Peaches, white, red, and yellow fleshed; Peres of all sorts, Peer-Plums black and yellow, Quince trees, Raspes, Reisons (Red Currants), small Nuts, Strawberries red and white, Service trees, Wardens white and red; Wallnuts, Wheat (white), Plums."

Lists of flowers and vegetables are printed in the March Abstract. They are divided into sections, thus: "Seeds and Herbes for the Kitchin," "Herbes and Rootes for Sallets and Sauce," "Strowing Hearbs of all Sorts," "Herbs, Branches, and Flowers for Windows and Pots," "Herbs to Still in Summer," and "Necessarie Herbes to Grow in the Garden for Physic not Rehersed Before." To detail the whole of these lists would occupy too much space.

However, it may be said of the first, those employed in the composition of pottage—a mess of meats and vegetables, and sometimes oatmeal—that forty-six are named, of which exactly half the number are weeds or indigenous flowers. The second list contains those for cooking as dishes, or for consumption as salads, cooked or uncooked, or as pickles, and comprises twenty kinds, eight of which also occur in the first list. Cucumbers and Melons are included, and of the following he remarks:—"These buie with the penie, or looke not for anie." "Capers, Lemmons, Olives, Orenge, Rise, Samphire." The third list is a short one, comprising "Beans, Cabbages, Carrots, Citrons (Citrus), Gourds, Marews (a long-rooted Turnip), Pompion (Pumpkin), Parseneps, Runcivall Pease (an early variety which can be traced through four centuries), Rape, and Turneps."

The fourth list of "strowing" herbs are nearly all aromatic. It includes Daisies, Roses, Violets, Cowslips, and Pagles (*Polyanthus*). The remainder, sixteen in number, are still almost all in cultivation as "herbs." At this period they were in request to sprinkle over certain cooked dishes; to adorn nuptial couches, as in "Spenser's Epithalamion":—

Now bring the Bryde into the Brydall boures.  
The night is come, now soon her disarray,  
And in the bed her lay.  
Lay her in Lillies and in Violets,  
And silken courtains over her display.

The "Winter's Tale" contains a reference of a like nature. But apartments also were strowed with flowers, and on special occasions the very streets.

Strowe we the ground with Daffadownillies, &c.

The fifth list, consisting of flowers, is of the greatest importance, detailing as it does the flowers that were popular previous to the influx of exotics that commenced about this time. We also gather inferentially that the floral decoration of houses was even then provided for, though we know that decorating churches had been discontinued. Nor does it appear that flowers were worn on the person, as they certainly were at an earlier period, and again in the next century. This book on these accounts is so replete with interest that it tempts me to adventure on the good nature of the Editor to let it be printed, rejecting, however, some of the detail. It is as follows:—

"Baies, Batchelor's Buttons, Bottles (*Centaurea Cyanus*) blew, red and tawny, Collumbines, Campions (*Agrostemma coronaria*), Cowslips, Daffodondillies (including *Narcissus biflorus*, and perhaps *poeticus*), Eglantine, Fetherfew, Flower Armour (Floramor, or Prince's Feather), Flower de luce (*Iris Florentina*), Flower-gentle white and red (Lyte refers to three plants under this name—*Amaranthus hypochondriacus*, *A. caudatus*, and *Atriplex hortensis*), Flower nice (?), Gilleflowers red, white, and carnation; Hollihocks red, white, and carnation; Indian Eie (here *Tagetes erecta*), Lavender (includes *Santolina chamæcyparissas*), Larksfoot (*Delphinium consolida*), Laus tibi (?), *Lilium convallium* (Lily of the Valley), Lillies, red and white (*Lilium croceum* and *L. candidum*), Marigolds, double, *Nigella Romana* (*N. sativa*), Paoncies, or Hearts-case, Pagles, green and

yellow (*Polyanthus*), Pinks of all sorts, Queen's Gilloflowers (*Hesperis matronalis*), Rosmarie, Roses of all sorts, Snag-Dragons (*Antirrhinum*), Sops-in-Wine (three plants at this date were so-called, namely, *Trifolium purpureum*, *Medicago sativa*, and a single Carnation, the last-named, doubtless, Tusser's plants); Sweet William, Sweet John (a kind of the plant last named), Star of Bethlehem, Ornithogalum, Star of Jerusalem, (*Tragopogon pratensis*), Stocke Gilloflower (*Matthiola incana*), Tuft Gilloflower, *Dianthus prolifer*? Violets, yellow and black, and Wall Gilloflowers of all sorts (Wallflowers). The other lists are of no importance, being nearly all weeds.—B.

## Coronation Memorial Trees.

The latest intelligence from Buckingham Palace raises the hope that the Coronation of His Majesty is only deferred for a time, and that in the early autumn we shall yet celebrate that unique and joyful event. Be it so, and the trees so long prepared and kept for the intended midsummer planting will be brought forward in far greater numbers than they would have been in June. That we shall all plant yet, is our God-confiding hope.

The illustration of trees intended as memorials to be planted on Coronation Day is from a photograph sent to us from Mr. Jas. Barson, gardener to the Earl of Sandwich, Hinchbrook, Huntingdon, who tells us that the trees were prepared as shown, by Messrs. Wood and Ingram, nurserymen, Huntingdon and St. Neots. "The photograph," adds Mr. Barson, "is sent as a result of your recent paragraphs, especially the one which stated that the Dundee folks had been hunting for suitable trees and could not find them." Many of the specimens are very fine, several being over 16ft in height. The crates they are in can be let into the ground, and the trees, receiving no disturbance, can hardly fail to grow. They are at present in capital condition, the following list being the names of them:—British Oak, Scarlet Horse Chestnut, Copper Beech, Mountain Ash, Lime *Tilia dasystyla*, Beech (common), *Cedrus Deodara*, *Picea pungens glauca*, *Picea pungens argentea*, the Occidental Plane, Golden Oak, *Acacia inermis*, *Cedrus Libani*, *Cedrus atlantica glauca*, Scarlet American Oak, and *Cupressus macrocarpa lutca*.

## How the Street Merchant Saved Covent Garden.

After their disastrous experiences of Wednesday last week the wholesale dealers in flowers and perishable foods in London were quite prepared for anything that was bad to happen on the Thursday, and the most pessimistic predictions were largely fulfilled. To the glutted overnight markets there came in the dawn an abundant fresh supply. Its arrival was a torturing sight to the dealers. They made (says the "Daily Mail") a resolve to clear the markets at any cost. The Covent Garden florists were inclined to laugh at the result, for to men of experience it seemed so utterly impossible. They had practically only one class of customer—the flower girl. The flower girl, however, is not despised in Covent Garden, for many of the old dealers declare that she has saved the market many a time by coming in and clearing it at some sort of price—all for cash, too. Attracted by the "slump" reports in the papers, she went in force to the Garden on the Thursday, and, though the stock was so heavy that it was beyond her power to do anything like save the situation, she poured in pence and shillings to the dealers, who would otherwise have had absolutely nothing at all. This was the basis on which she did it:—

|                              | Ordinary Price.            | Thursday.  |
|------------------------------|----------------------------|------------|
| Extra Excelsior Lilies .. .. | 2/6 bunch .. ..            | 8d.        |
| Extra special Lilies .. ..   | 1/6 bunch .. ..            | 2d.        |
| Best Lilies .. ..            | 1/- bunch .. ..            | 1d.        |
| Longiflorums .. ..           | 2/- bunch .. ..            | 3d.        |
| Scarlet Geraniums .. ..      | 1/- bunch .. ..            | 2d.        |
| Odontoglossum Orchids .. ..  | 2/- to 4s. dozen blooms .. | 3d.        |
| Cattleya Orchids .. ..       | 18/- dozen blooms .. ..    | 2/6        |
| Roses, various .. ..         | 1/6 to 2/- bunch .. ..     | 2d. to 1d. |

In this way did the flower girl clear out Covent Garden till in the afternoon there was not a Rosebud or Orchid or a Lily left. The Rochford firm alone sold to the girls 509 dozen bunches of Lilies of the Valley, 906 dozen blooms of Lilies, and 171 dozen Orchids. A solitary girl, who does all her selling in the City, bought no fewer than 100 dozen Orchids. The fruit part of Covent Garden also had another very bad day. There was the same desire to get out at any prices as with the florists, and some classes of fruit were cleared, pence often being taken when shillings should have been. Really there were no prices to quote, for no offer was refused, and there were the widest variations, though all were down to an absurd level. Despite every effort, quantities of the best Peaches, Nectarines, and the like still remained on hand, and in sorrow and disgust the market shut up early and went off to try the Bank Holiday.

## Societies.

### National Rose—Temple Gardens, July 2nd.

Despite the lamentable backwardness and fluctuating character of the season, the National Rose Society had no cause to be dissatisfied with the exhibition presented on Tuesday last in the Inner Temple Gardens. The few warm and sunny days experienced just prior to the event were virtually the salvation of this, the main exhibition of the chief rosarians' year, and certainly the noble groups and line after line of superb flowers came quite as a revelation to very many of us. A week ago an exhibition of Roses in London was an impossibility, as evidenced at the Holland House Conference, and yet we are able to record the passing of one of the finest shows in all respects that the parent Rose Society in England has held during its history. Tuesday was certainly the day of the decorative Roses, and it is unnecessary to say that they are exceedingly popular, and increasingly so. The weather was dull, and at the moment of writing rain seemed imminent.

#### The President's Speech.

The veteran and greatly respected president of the Society, the Very Rev. S. Reynolds Hole, was induced to say a few words on behalf of the Society, which he did from one of the tables in the larger tent.

He said: We all of us know and respect the words of the Latin poet who said, "The things which we hear interest us much less than the things which we see." A few words I must say to explain the privilege of my being here. It is forty-four years since I opened the first Rose show held in England. Since that time, and chiefly owing to the National Rose Society, the Queen of Flowers has made wonderful developments in appreciation and culture. I need not praise the flowers, but I must mention the labours of my reverend friend Mr. H. H. D'Ombra (and I would he were here), who, I am pleased to hear, is better again; also Mr. Mawley, the secretary, and the other officials of the Society. You will see to-day, not only how the Rose can be developed for exhibition, but for their uses for decoration in the garden. The Dean concluded by thanking the Benchers for their kindness in allowing the use of the Inner Temple Gardens.

#### Nurserymen.

**GENERAL SECTION: DIVISION A:**—The premier class for seventy-two blooms in distinct varieties, for the Champion Trophy, Gold Medal of £6 in cash, brought forward five competitors, who staged clean, strong blooms of excellent colour, though lacking size in some instances. The best blooms chosen from all the collection were, to our mind, the following:—La France, Marchioness of Downshire, Bessie Brown, Ulster, Margaret Dickson, Mme. Luizet, White Maman Cochet, Rubens, Mrs. Sharman Crawford, Mildred Grant, Souv. de S. A. Prince, Mrs. J. Laing, Robert Scott, Papa Lambert, and Medea. It will be noticed that many of these are almost new varieties, and their excellence was unmistakable.

The honours finally fell to Messrs. Frank Cant and Co., Braiswick Nursery, Colchester, Essex. Their collection included, in the back row: A. K. Williams, Catherine Mermet, Capt. Hayward, Caroline Testout, Cleopatra, Her Majesty, François Louvat, Killarney, K. A. Victoria, Mrs. J. Laing, Chas. Lefebvre, Margaret Dickson, Mrs. S. Crawford, Lady Clanmorris, Mrs. W. J. Grant, Rev. Alan Cheales, Suzanne Marie Rodocanachi, Ulster, Exposition de Brie, White Lady, Ulrich Brunner, Souv. de S. A. Prince, Prince Arthur, and Mildred Grant. Second row: Antoine Rivoire, François Michelin, Bessie Brown, Etienne Levet, Countess of Caledon, Horace Vernet, Ellen Drew, Général Jacqueminot, Margaret Appert, Lady Mary Fitzwilliam, Marchioness of Downshire, Marie Baumann, Maréchal Niel, Marquis Litta, Medea, Mme. Eugénie Verdier, Lawrence Allen, J. D. Pawle, Mme. de Watteville, Jeannie Dickson, Souv. de Pres. Carnot, Oscar Cordell, Souv. d'un Ami, and Exquisite. Front row: Beauty of Waltham, Bridesmaid, Comte de Paris, Devoniensis, Aug. Rigotard, Mme. Gabriel Luizet, Gladys Harkness, Duchess of Portland, Robert Scott, Mme. Cusin, Dr. Andry, Mrs. Cocher, Mme. Jules Grolez, Alf. Colomb, Dupuy Jamain, Papa Lambert, Mrs. F. Cant, Jean Soupert, Mme. E. Boullet, Marquis de Castellane, Victor Hugo, Helen Keller, and The Bride.

The second prize was well won by Messrs. B. R. Cant and Sons, The Old Rose Gardens, Colchester, with choice representatives of Mrs. W. J. Grant, Marchioness of Downshire, Ulrich Brunner, A. K. Williams, Souv. de S. A. Prince, Mrs. Sandford, and White Lady. Messrs. D. Prior and Son, Colchester, were strong as third, showing good blooms all round.

Class 2, for forty distinct varieties in trebles.—Here a large number of the Roses were more or less ragged, or at least not quite up to the higher standard. Three entered, the leading honours going to Messrs. Alexander Dickson and Sons, Limited, Newtownards, Co. Down, Ireland. The flowers were strong and bright, including, in the back row, the following:—White Lady,

A. K. Williams, Mildred Grant, Ulster, Bessie Brown, Horace Vernet, Helen Keller, Duchess of Portland, La France, Twinkelow, Lady Ashton, Comtesse Serenye, Marchioness of Dufferin, Mrs. W. J. Grant, Mrs. Edward Mawley, Lady Clanmorris, Alice Linsdell, Marchioness of Downshire, Kaiserin Aug. Victoria, and Mrs. S. Crawford. Second, or front row: Souv. de President Carnot, Robert Scott, Lady Mary Fitzwilliam, Caroline Testout, Bridesmaid, Muriel Grahame, Sir Robert Stout, Princess Beatrice, Golden Gate, Medea, Catherine Mermet, Niphotos, Souv. de S. A. Prince, Comtesse de Nadaillac, Mme. Cusin, Mme. de Watteville, Margaret Dickson, Countess of Caledon, and Dr. Andry.

The second place, out of three entrants, was occupied by Messrs. B. R. Cant and Sons, The Old Rose Gardens, Colchester, Essex, with good blooms of Dr. Sewell, Mrs. J. Laing, Marchioness of Dufferin, and Mrs. W. J. Grant. On the whole they were smaller and not so smooth as the Dieksons' Messrs. F. Cant and Co., Colchester, came in third.

**DIVISION B.**—In the third class for forty-eight blooms distinct there were five entries, but one of the competitors, Mr. A. Prince, was disqualified from having included two blooms of the variety Dupuy Jamain. The same exhibitor was also disqualified in the twenty-four Teas for the same mistake. Mr. Hugh Dickson, of the Royal Nurseries, Belfast, led off here, with very fair blooms indeed. The back row included: Rev. Alan Cheales, Danmark, Oscar Corail, Caroline Testout, Marquis Litta, Mrs. S. Crawford, Helen Keller, White Lady, Marchioness of Downshire, Bladud, Ulrich Brunner, Lady Quartus Ewary, Bessie Brown, Gustave Piganeau, Countess of Caledon. Second row: Comtesse de Ludre, Dorothy, Alphonse Supert, Souv. de President Carnot, Ulster, Mme. Hoste, Killarney, Captain Hayward, Marquis de Castellane, La France, Beauty of Waltham, Marjory, Earl Dufferin, La Fraicheur, Mme. Guillot, Marchioness of Dufferin. Third row: Duke of Wellington, Mme. Jules Grolez, Horace Vernet, Kaiserin Aug. Victoria, Gladys Harkness, Mme. Cadeau Ramey, Apotheker George Hoffer, Mrs. W. J. Grant, Jeannie Dickson, Margaret Dickson, E. Y. Teas, Anna Olivier, Heinrich Schultheis, Maman Cochet, L'Innocence, and Victor Hugo. Second in this class came Messrs. J. Burrell and Co., Howe House Nurseries, Cambridge, having splendid samples of Gladys Harkness, Tennyson, Mme. Bavary, La France, and Caroline Testout. Third out of five entrants came Messrs. R. Harkness and Co., Hitchin, Herts, with Lady Fitzwilliam, Rev. A. Cheales, La Fraicheur, and Dr. Sewell.

Six entrants contested for premier honours in Class 4, and here Mr. John Mattock, New Headington, Oxford, won with fair blooms, the names of which we give: White Maman Cochet, Mrs. S. Crawford, K. A. Victoria, La Fraicheur, Muriel Grahame, Gustave Piganeau, Mrs. E. Mawley, and Caroline Testout. Second row: Medea, Dr. Andry, Souv. d'Elise, Mme. Abel Carriere, Cleopatra, A. K. Williams, Hon. E. Gifford, and Bridesmaid. Front row: Margaret Boudet, Catherine Mermet, Dupuy Jamain, Capt. Hayward, Souv. d'un Ami, Duke of Teek, Caroline Koch, and Mrs. B. R. Cant. Mr. Geo. Mount, Canterbury, formed a very close and good second, with fine blooms of Caroline Testout, La France, and Mrs. W. J. Grant. Mr. C. Turner came third.

In class 5, for twenty-four distinct varieties, in trebles, the redoubtable Canterbury grower, Mr. Geo. Mount, proved the excellence of his blooms, being first. His blooms were large and well set up, including, in the back row: Ulrich Brunner, Mme. Gabriel Luizet, Bessie Brown, Mrs. S. Crawford, Duke of Edinburgh, Caroline Testout, Capt. Hayward, Catherine Mermet, Fisher Holmes, Mrs. John Laing, C. Lefebvre, and Her Majesty. Front row: Marie Baumann, Marchioness of Downshire, Beauty of Waltham, Mrs. Rumsey, Anna Olivier, Clio, Dr. Andry, La France, Gén. Jacqueminot, Mme. Tropot, Prince Arthur, and Margaret Dickson. Mr. Geo. Prince, Longworth, Oxon, second, and Mr. J. Mattock, New Headington, Oxford, third.

#### Teas and Noisettes.

**DIVISION I.**—Class 6, twenty-four blooms distinct. Lovely blooms were seen in all of the stands, and in this first class of the section Messrs. F. Cant and Co. (who won the special champion trophy same day out at the Richmond Show) were here in the forefront. The varieties were: Mme. de Watteville, Souv. de S. A. Prince, Souv. d'un Ami, Mme. Hoste, Mme. Cusin, Medea, Maman Cochet, and Rubens. Second row: Golden Gate, Mrs. E. Mawley, The Bride, Catherine Mermet, Cleopatra, Caroline Kuster, and Ernest Metz. Front row: Mme. A. Carmody, Innocente Pirola, Jean Ducher, Mme. Willermoz, Lady Roberts, Bridesmaid, Souv. d'Elise, and Etoile de Lyon. All were very superior. It was unfortunate for Prince, of Oxford, that he should have been disqualified for showing two of Souv. d'Elise Vardon. The blooms were exceptionally fine, and superior, perhaps, to Cant's. Messrs. D. Prior and Son were a fair second, and no third.

A dozen superb representative blooms were staged in the succeeding class by Messrs. Burrell and Co., who beat Mr. John Mattock and Mr. Geo. Mount, the second and third winners. Messrs. Burrell had White Maman Cochet, Ernest Metz, Com-



tesse de Nadaillac, Maman Cochet, Souv. de Elise Vardon, Cleopatra, Mme. Cusin, The Bride, Bridesmaid, Muriel Grahame, Etoile de Lyon, and Souv. d'un Ami. The blooms were well staged, but the labels almost impossible to read. The second collection was very fine indeed, and included good blooms of Mrs. E. Mawley, Princess of Wales, White Maman Cochet, and Cleopatra. Third, Mr. Geo. Mount.

Only two competitors entered class 8 for sixteen varieties in threes, Mr. G. Prince, of Oxon, winning. The blooms on the whole were fair, but not of superior merit. He staged Mrs. E. Mawley, Souv. de S. A. Prince, Comtesse de Nadaillac, Muriel Grahame, Mme. Cusin, Souv. d'Elise Vardon, Catherine Mermet, and Princess Beatrice in one box; and Souv. d'un Ami, Medea, Cleopatra, Maman Cochet, The Bride, White Maman Cochet, Bridesmaid, and Alba Rosea in the other.

#### Exhibition Roses in Vases.

Classes 9 and 10 were devoted to these, and though more artistic care might have been expended with advantage to the general complement, yet the blooms as thus seen were of great beauty and a delight to the eye. Mr. Geo. Prince was easily first, and staged his flowers with plenty of freedom, each being well held up.

Taller vases were used at the back, and all were arranged over black velvet. Comtesse de Nadaillac was very fine here, but so were all the others. Mr. Geo. Mount stuck more to the H.P.'s, which seem so coarse beside Prince's Teas and H. Teas; and Mr. C. Turner was third. Six entered. Mr. Prince again led in class 10 for nine distinct varieties, all well staged; and Mr. J. Mattock was second out of three.

#### "Garden" or Decorative Roses.

This section was undoubtedly the greatest assistance in aiding the show and its success. Messrs. F. Cant and Co. were equally to the fore here, as in the foregoing classes, and staged both good flowers and set them up well. Gustave Regis was lovely, as also Aglaia, Reine Olga de Wurtemberg, Ma Capucine, Mme. Louis Poucet, Crested Moss, Mme. Cochet, Rainbow, Thalia, Camoens, Macrantha, Souv. de J. B. Guillot, Claire Jacquier, Leuchstern, Fellenberg, Papillon, Mme. Pernet Ducher, Rubin, Anna Maria de Montravail, Gloire de Polyantha, Annie of Gierstein, W. A. Richardson, Rosa Mundi, Alister Stella Gray, and Blanche Double de Coubert. Messrs. G. Cooling and Sons, Bath, were second, their grouplet being too slack; and third Mr. J. Mattock. The grouplets were each rectangular and tiered, there being four stages for the vases, which were set on all sides.

In the class for eighteen distinct varieties, not less than three trusses of each, there were three competitors, Mr. George Prince, Longworth, Oxford, being placed first with a fine display, the best being Laurette Messimy, Marquis of Salisbury, Mme. A. Chatenay, Mme. Falcot, Mme. Eugène Resal, Souv. de Catherine Guillot, and Bellefleur. Mr. Charles Turner, Slough, followed with well arranged bunches of Royal Scarlet, W. A. Richardson, Gustave Regis, Purity, and Mme. Falcot; Messrs. B. R. Cant and Sons bringing up the rear.

For eighteen distinct varieties of summer flowering Roses, H.P.'s, H.T.'s, T's, and Chinas not admissible, there were five contestants, but no less than three competitors were disqualified for staging contrary to the schedule. Messrs. G. Cooling and Sons, Bath, secured the premier award, with good bunches of Purity, Crimson Rambler, Flora, Captain Ingram, Hebe's Lip, and Tuscany. The second award fell to Messrs. Paul and Son, Cheshunt, for good representative bunches of Old Black Moss, Morletti, Crested Moss, Blanche Moreau, and Carmine Pillar.

#### Open Classes (Nurserymen and Amateurs).

For twelve blooms of Hybrid Teas, distinct varieties, there were six competitors, and Messrs. B. R. Cant and Sons were awarded first prize for an even box of medium-sized blooms of good finish. The best blooms were Marquis Litta, Bessie Brown, La France, White Lady, Mrs. W. J. Grant, Killarney, Kaiserin Aug. Victoria, and Caroline Testout. Messrs. D. Prior and Son followed with good blooms of La France, Kaiserin Aug. Victoria, Mrs. W. J. Grant, Mildred Grant, and White Lady; and Messrs. F. Cant and Co. were third with smaller flowers of excellent finish.

The class for twelve blooms of any white or yellow Rose brought out four boards, Messrs. D. Prior and Son coming first with a good level board of Maréchal Niel; Mr. George Prince followed with fine blooms of Bessie Brown, and Messrs. B. R. Cant and Sons were third with Margaret Dickson in good form.

Twelve blooms of any light or dark crimson Roses found eight exhibitors prepared to face the judges, Messrs. B. R. Cant and Sons being a good first with excellent blooms of Ulrich Brunner; equal seconds were awarded to Messrs. F. Cant and Co. with a fine board of A. K. Williams; and Mr. Hugh Dickson, Belfast, with an equally good board of Rev. Alan Cheales.

A similar class for twelve blooms of any light pink or rose-coloured Roses brought out twelve exhibits of a very high

standard, Messrs. D. Prior and Sons being placed first with a glorious box of Mrs. J. Laing, Messrs. B. R. Cant and Sons being second with highly coloured blooms of Mrs. W. J. Grant; and Messrs. G. and W. Burch, Rose Growers, Peterborough, were third with La France.

The class for twelve blooms of any Tea or Noisette was poorly represented, only two exhibitors staging, Mr. George Prince winning well with a good box of Comtesse de Nadaillac, followed by Messrs. D. Prior and Son, who staged good blooms of the old Alba Rosea.

For nine blooms of any new Rose there was only one entry, Messrs. F. Cant and Co. taking the first position with a grand box of Mildred Grant.

Twelve blooms distinct varieties of Roses offered for sale since 1899: Here there were three entries. Messrs. Alexander Dickson and Sons, Limited, were first with a good board, which contained good blooms of Alice Lindsell, Mildred Grant, Ulster, Tennyson, Duchess of Portland, Red Christy, and Albert Stafford. Messrs. F. Cant and Co., Colchester, followed with good blooms of Mrs. Cocher, Frau Karl, Druschi, Gladys Harkness, and Tennyson; Messrs. Paul and Son, Cheshunt taking third place.

#### New Seedling Roses.

A number of novelties were sent forward, but none received the coveted Gold Medal, or even any mark whatever. Messrs. R. and J. Farquhar and Co., Boston, Mass., U.S.A., sent the Farquhar Rose, a Wichuriana-Rambler cross after the Dorothy Perkins type, but with paler flower clusters. Mr. H. Dickson contributed Lady Quartus Ewart, a white, or almost white, H.T.; Messrs. F. Cant and Co. had their H.T. Lady Roberts; Messrs. B. R. Cant and Sons had a hybrid Bourbon "Maharajah," with large velvety single crimson flowers. Mr. G. Prince had Teas, Longworth Beauty (deep tea-coloured), Longworth Fairy (rich cerise-crimson), and Souv. de Pierre Notting (tea, fawn and reddish); and Messrs. Paul and Son, their weeping rugosa alba.

#### Decorative Classes.

A decoration of cut Roses for dinner-table, arranged with any cut foliage, Ferns or Grasses, brought out seven contestants. Miss Maud E. West, Frith Dene, Reigate, secured first honours with a beautifully arranged table of cream and yellow Roses. The second place fell to Mrs. O. S. Orpen, West Bergholt, Colchester, for a pretty arrangement of white and red single Roses most tastefully arranged; Mr. J. Mattock being third with a light arrangement of Roses, in which Perle d'Or was the chief subject employed.

The set of three ladies' sprays did not bring out anything of an extraordinary character. Mrs. A. F. Harwood, 16, St. Peter's Street, Colchester, was first with heavy arrangements; Mr. J. Mattock came second with a much lighter display, though they were over-large; while Miss B. H. Langton, Raymead, Hendon, was third with beautifully light sprays.

#### Classes 24, 25, and 26.

The class for twelve bunches of single flowered Roses brought out three contestants. Here Mr. George Prince was well ahead, with good bunches of Austrian Copper, Lady Penzance, Paul's Carmine Pillar and Moschata Alba. Messrs. G. Cooling and Sons, Bath, were second, showing Rugosa, Macrantha, and Irish Glory in good style; while Messrs. Paul and Son, Cheshunt, brought up the rear.

Nine distinct Roses suitable for buttonholes made a pretty display, though there were only three competitors. Mr. J. Mattock being first with some capital varieties, which included Marie Van Houtte, Gustave Regis, Anna Olivier, W. A. Richardson, and Souv. de C. Guillot. Mr. Alfred Evans, Oxford, was second, and Mr. George Mount third.

A class was provided for nurserymen and florists to illustrate the decorative value of the Rose. Here Messrs. Paul and Son came to the front, having a good display of Roses suitable for this purpose. Lady Battersea, Leonie Lamesch, Polyantha Leuchstern, Royal Scarlet, and Paul's Carmine Pillar were excellent. Mr. George Mount was the other exhibitor and took second prize, but the exhibit hardly carried out the spirit of the schedule.

#### Amateurs.

The Champion Trophy class was contested by four exhibitors, but the veteran Mr. E. B. Lindsell, Hitchin, was again invincible, staging a good even stand. The varieties were White Lady, Ulrich Brunner, Bessie Brown, S. M. Rhodocanachi, Mrs. Mawley, Capt. Hayward, Mme. Hausmann, Muriel Grahame, Louis Van Houtte, Golden Gate, Horace Vernet, Bridesmaid, La France, Helen Keller, Mrs. W. J. Grant, Beauty of Waltham, Maman Cochet, Fisher Holmes, Lady Mary Fitzwilliam, Chas. Lefebvre, Mme. Cusin, Maurice Bernardin, Gustave Piganeau, Capt. Christy, Marie Verdier, Mme. Hoste, Duke of Wellington, Mme. de Watteville, Dr. Sewell, Mrs. J. Laing, Catherine Mermet, Ulster, Maréchal Niel, A. K. Williams, Mme. G. Luizet, and Souv. d'Elise Vardon.



The second prize was awarded to Mr. O. G. Orpen, West Bergholt, Colchester, who was a close second, and, remarkable to relate, all three medal Roses were found in this exhibit, Maman Cochet, the best Tea; Mrs. John Laing, the best Hybrid Perpetual; and Bessie Brown, the best Hybrid Tea. Other good blooms were: Souv. d'Elise Vardon, White Maman Cochet, Mrs. Cocher, Marchioness of Downshire, Catherine Mermet, Mrs. W. J. Grant, Dr. Sewell, and Mme. Jules Grolez, while the Rev. J. H. Pemberton, Havering-atte-Bower, was third.

In the class for twenty-four blooms distinct there were two competitors, Mr. R. E. West, Reigate, being placed first with a capital stand. The varieties employed being: Clio, Marquis Litta, La France, Mme. J. Pereire, Prince Arthur, Etienne Levet, Margaret Dickson, Mrs. J. Laing, Marie Rady, Maman Cochet, Dr. Andry, Princess of Wales, S. M. Rhodocanachi,

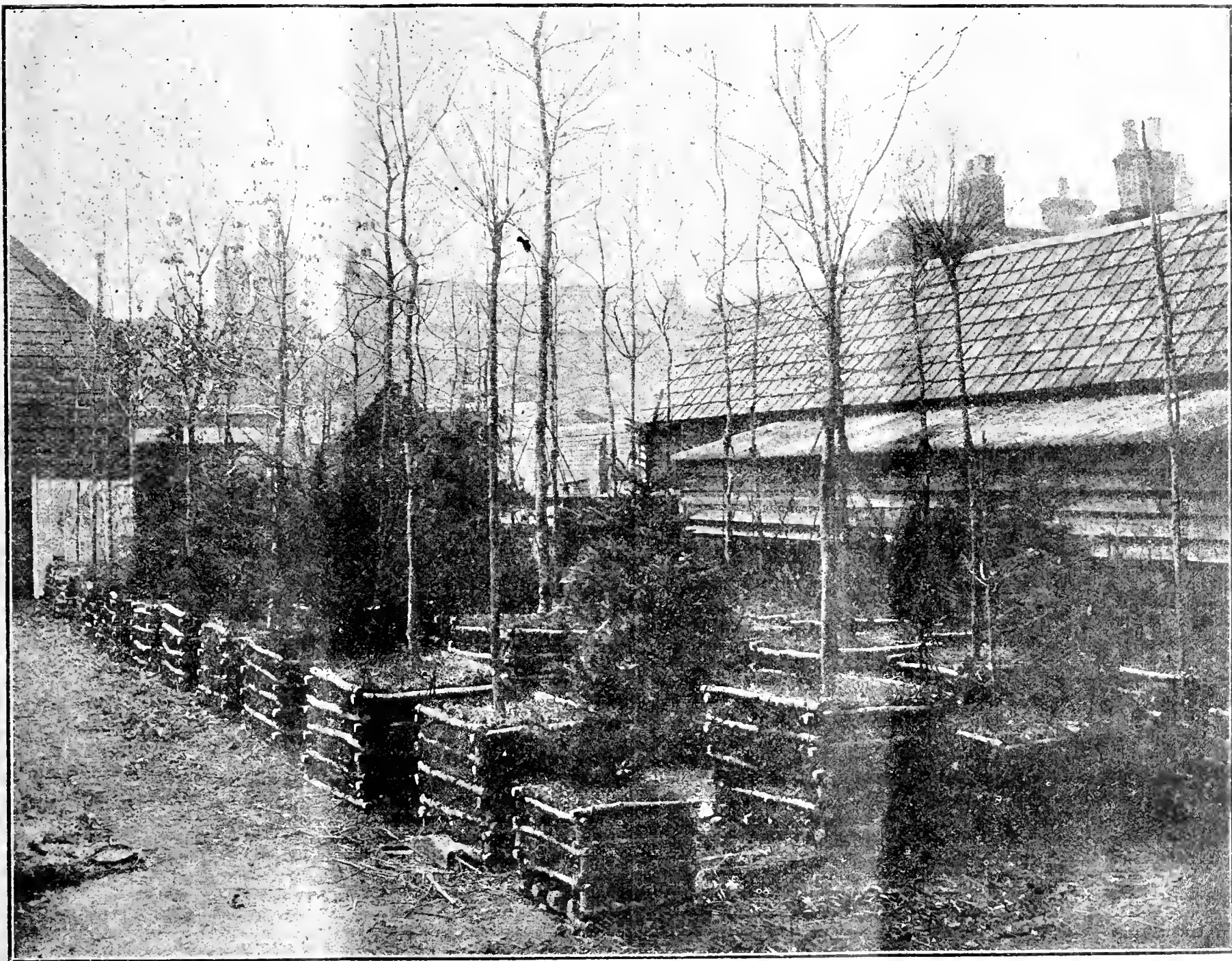
Mrs. W. J. Grant, Bessie Brown, Marquise Litta, and Mrs. J. Laing in good form.

For twelve trebles distinct Mr. E. B. Lindsell was the only competitor in the field, and he richly deserved the first prize awarded. The best were Captain Hayward, Mrs. S. Crawford, Lady Mary Fitzwilliam, White Lady, and Mrs. W. J. Grant.

For twelve blooms any Rose except Teas or Noisettes there were two competitors, Mrs. Haywood, Woodhatch Lodge, Reigate, being first with a level box of Mrs. S. Crawford, and the Rev. J. H. Pemberton second with a weather-stained box of Bessie Brown.

#### DIVISION D.

The Ben Cant Memorial prize for twenty-four blooms distinct varieties called forth five stands, the first position being taken by



Coronation Memorial Trees. (See page 14)

Rubens, Le Havre, Beauty of Waltham, Caroline Kuster, Ernest Metz, Mrs. Sharman Crawford, Gustave Piganeau, Capt. Hayward, Princess Mary of Cambridge, and Alba Rosea. Mr. Alfred Tate, Downside, Leatherhead, was second with rather smaller flowers, the best being Capt. Hayward, Bessie Brown, La France, and Medea.

#### DIVISION C.

The following class, also for twenty-four blooms, but was an extra, and intended for those amateurs who have not previously won the Champion Trophy or the first prize in this class.

For twenty-four blooms distinct there were only two competitors, Mr. O. G. Orpen being first with a box of medium quality, the best varieties being: Mrs. J. Laing, Kaiserin Augusta Victoria, Augustine Guinnoiseau, Medea, Souv. de S. A. Prince, Maman Cochet, and Mme. Eugene Resal. The Rev. J. H. Pemberton made a good display for second position, staging

Mr. E. M. Bethune, Denne Park, Horsham, for a moderate display, the best being: Crown Prince, La France, Catherine Mermet, White Maman Cochet, Bridesmaid, Souvenir d'Elise, and Mrs. E. Mawley. Mr. F. Wellesley, Westfield, Woking, staging well for second place with good blooms of Mrs. W. J. Grant, White Lady, Bessie Brown, White Maman Cochet, and Kaiserin Augusta Victoria.

For eight distinct varieties of three blooms each five competitors staged. Mr. Ed. Mawley, Berkhamsted, being a good first with glorious blooms of Mrs. E. Mawley, and typical triplets of Caroline Kuster, La France, The Bride, and Mrs. W. J. Grant. Mr. E. M. Bethune followed with a less creditable exhibit, the best being Mrs. Sharman Crawford, A. K. Williams, and Marquise Litta, Mr. R. E. West being a creditable third.

For nine blooms of any Rose except Tea or Noisette there were five entries, the first prize going to Mr. E. M. Bethune for

a good box of Mrs. Sharman Crawford; Mr. W. C. Romaine, The Priory, Old Windsor, securing second with well-coloured Crown Prince, Mr. R. E. West being third with La France.

## DIVISION E.

The growers of less than one thousand plants came out strongly, no less than nine growers staging in this class, Mr. F. R. Curtis, Wokingford, Colchester, being well to the fore for first place. He had good blooms of Mrs. J. Laing, Souv. de S. A. Prince, Mme. Jules Grolez, La France, and Helen Keller. Mr. Thomas B. Gabriel, Elmstead, Woking, was second with a good board, which included good examples of Mrs. Ed. Mawley, Capt. Hayward, Caroline Testout, Clio, and La France, and Mr. G. W. Cook, Muswell Hill, brought up the rear.

The class for six blooms of any Rose except Tea or Noisette was represented by seven entries. Mr. S. B. Gabriel was placed first with good blooms of La France, followed by Mr. G. W. Cook with Bessie Brown, and the Rev. R. Powley, Upton Scudamore, third with pretty blooms of Kaiserin Augusta Victoria.

## DIVISION F.

The class for nine distinct varieties appeared popular, for there were eleven entries, the first prize being awarded to Mr. R. W. Bowyer, Hertford Heath, Hertford, who staged good flowers of Caroline Testout, White Lady, Marquis Litta, and Mrs. Edward Mawley—a strong exhibit; Mr. L. N. Times, Hitchin, being placed second, and Mr. G. A. Hammond, Burgess Hill, third.

For six blooms distinct there were only three entries, Mr. Charles K. Douglas, Rathmolyon, Co. Meath, securing first with a well balanced exhibit; while Messrs. R. Boswell, Hitchin, and E. R. Smith, Esq., Muswell Hill, followed in the order named.

For six blooms of any Rose except Teas or Noisettes there were four entries, the first prize going to Mr. G. A. Hammond, who staged good blooms of Bessie Brown; Mr. R. W. Bowyer was second with well coloured Marquis Litta, and Mr. Charles K. Douglas was third with Bessie Brown.

## DIVISION G.

For six blooms distinct Mr. Charles Lamplough, Chatteris, Cambs. was first; especially good were his flowers of Kaiserin Augusta Victoria, Xavier Olibo, and Ulrich Brunner. Mr. H. Williams, North Finchley, came second, and Mr. H. E. Molyneux, Balham, third.

Six competitors staged for the Challenge Cup, which coveted award was secured by Mr. G. A. Hammond, who placed a great deal of strength here; especially good were La France, Caroline Testout, Mrs. E. Mawley, and Killarney. Mr. George Moules, Hitchin, was second with a capital board, and Mr. H. P. Landon, Brentwood, was third.

For four, in trebles, there was an excellent competition, nine boxes being staged, the first award going to the Rev. F. Page Roberts, Halstead Rectory, Sevenoaks, the varieties being Marquis Litta, Souv. de S. A. Prince, and Antoine Rivoire. Mr. Ernest Wilkins, Sideup, was second, and the Rev. R. Powley third.

The Ramsey Cup was contested keenly by nine exhibitors, Mr. Alexander Hill Gray, Newbridge, Bath, securing the coveted award with good blooms of Golden Gate, Maman Cochet, White Maman Cochet, Princess Beatrice, and The Bride. The Rev. J. H. Penberton was a close second with typical blooms of Danmark, Comtesse de Nadaillae, and Mrs. J. Laing; and Mr. E. M. Bethune third.

The novices' class for six blooms distinct brought out six entries. The premier award fell to Mr. Chas. K. Douglas for a strong six, followed by Mr. Claude Magniae, Esher; while the third position was allotted to Mr. Lewis S. Pawle, Harrow.

In the class for six blooms distinct, the novices responded with eight entries. Mr. Joseph Wakeley, Rainham, was well to the fore, the stand being level and good, Miss Lillyett, Reigate, following, and Mrs. Du Buisson, Guildford, third.

There were seven competitors in the class for amateurs who have joined the society since the last metropolitan exhibition, the first prize going to Mr. E. J. Holland, Sutton, for a creditable exhibit, Mrs. Harry Thomas, Windlesham, following, and Mr. C. W. E. Duncombe, Stanstead Abbots, Herts, third.

## Ladies' Class—No. 63.

In one of the large tents this section of the schedule provided the chief display, and very delightful were each of the contributions, especially the simple arrangement of Messrs. O. G. Orpen, done in Lady Penzance Briar and Fortune's Yellow. The vases were low, and only numbered seven pieces in all. The very fine gauze-looking lace matching the flowers in the centre was very sweet, and a wise addition. Miss Elsie Watney, Shermanbury, Reigate, was second with a very different display, having a high glass vase in the centre, and numerous smaller ones in other positions. These were filled with single red Roses. Mrs. J. P. Fearson, Birdhurst, Reigate, and Miss Beatrice H. Langton, Raymead, Hendon, N., were equal third. There were fourteen tables in all.

## Best Blooms.

Six of the Society's Silver Medals are awarded, and on this occasion, in the nurserymen's section, the medal for the bloom other than H.T., Tea, or Noisette, fell to Messrs. F. Cant and Co. with Mrs. J. Laing. The same firm received the medal for the finest H.T. with Mildred Grant. For the best Tea or Noisette, Mr. J. Mattock was the recipient with Cleopatra.

Amateurs' Division.—Mr. O. G. Orpen received the three medals for the best blooms in this section, the three being in one collection (class 27, for thirty-six blooms). Mrs. J. Laing was the best other than H.T., T., or N.; Bessie Brown the best H.T., and Maman Cochet the finest Tea.

MISCELLANEOUS EXHIBITS.—In the non-competitive section Messrs. W. Spooner and Son, Arthur's Bridge Nursery, Woking, admirably staged a collection of garden and Tea Roses, the H.T.'s also being liberally included. In large bunches he showed Aurore (China), F. Kruger, Marie Van Houtte, Bridesmaid, The Bride, Mrs. W. J. Grant, and White Maman Cochet. Messrs. G. Jackman and Son, also from Woking, furnished a similar display.

Messrs. George Bunyard and Co., Maidstone, were very strong in the decorative Roses of the garden, showing large bunches in vases, the Austrian Briars, the Moss Roses, Ramblers (including Leuchstern), polyantha Paquerette, Aglaia, Mignonette, and Gloire de Polyantha. They had also Mme. Jules Grolez, Camoens, Amazone, Mme. Chedane Guinoisseau, Lady Battersea, and other Teas and H. Teas.

Messrs. Laxton Bros., Strawberry specialists, Bedford, were able on this occasion to present their splendid new Strawberry, "The Laxton," of which we gave a figure and full description last year, when it was introduced. The fruits were large, deeply coloured, odorous, firm, and of good flavour.

Some of the lesser classes in the Amateurs' division are not here reported, chiefly owing to the lack of time and the difficulty of finding them after the tents became filled with visitors. We are pleased to state that the attendance was very good in the afternoon, and the weather brightened considerably. The band of the 1st Life Guards played from two till six.

The New *Deutzia gracilis rosea*.

Everyone knows the shrub *Deutzia gracilis*, and but few shrub collections do not contain it. A variation is among recent introductions, the difference lying in the flowers, which are daintily tinged rose on the outside of the petals. It is a charming flower, and will be warmly welcomed. The colour (says Meehans' Monthly) may not hold when the flowers are forced in green-houses.

## A Famous Old Garden.

From Blackie's "Picturesque Tourist of Scotland," published in 1846, we extract the following, which relates to the long extinct experimental garden of the Royal Caledonian Horticultural Society:—"The Caledonian Horticultural Society was established in 1809, since which period large sums have been expended annually on the production of new fruits, flowers, and vegetables, and in perfecting and bringing to maturity those already introduced. In the centre of the garden stands a spacious and elegant hall for the meetings of the Society, adorned by a marble bust, by Steele, of the secretary, Dr. Neill; and in front of the hall, a fine lawn is laid out as a promenade ground. Here it is that the several exhibitions of exotic plants annually take place, attended by all the beauty and fashion of the city. The garden is arranged into various compartments, having soils suited for the different collections placed in them. The raised belts which surround and intersect the garden are occupied as an Arboretum, and contain authentic named specimens of all the newer kinds of trees and shrubs. There is an Apple orchard containing specimens of upwards of 900 named varieties; and a Pear orchard, containing upwards of 450 varieties. The collections also contain 85 varieties of Plums, 25 of Cherries, 27 of Currants, and 30 of Raspberries. The kinds of Strawberries are very numerous, extending to no fewer than 120 sorts, and of Gooseberries the collection is still greater, exceeding 400 kinds. One of the chief objects of the garden is also to exhibit the most approved kinds of culinary vegetables in a growing state, dully tallied (labelled) so as to form a school for the information of those visiting the garden; and to test such novelties or rarities as may from time to time be recommended, to make trial of various manures, and to exhibit different modes of culture." The garden, we may add, contained ten imperial acres, and commanded one of the finest views of Edinburgh from the north. It was situated at the further end of Howard Place, northward from the old village of Cannon-mills, and over the Water of Leith. The Royal Botanic Garden is situated further up on the same side.





### Fruit Forcing.

**CUCUMBERS.**—Attention must be given to plants in full bearing by way of thinning the exhausted growths and foliage, laying in young bearing wood, stopping one joint beyond the fruit, and earthing the roots periodically. Copious supplies of water or liquid manure will be required about twice a week, or as may be necessary; but avoid applying it too strong. Syringe at closing time, and maintain a good moisture in the house all day long by sprinkling the paths and walls as necessary, but avoid applying the liquid too strong. To stimulate plants in full bearing, a top-dressing of sweetened horse droppings sprinkled on the surface of the bed, and on this about a handful of soot per square yard, will do much to further root action, supply nourishment, and put substance and deep green colour into the fruit. If more be needed, liquid manure in the form of phosphate of potash and nitrate of ammonium, two parts the former and one part the latter in mixture, dissolving  $\frac{1}{2}$  oz of the mixture per gallon of water, and applying about once a week an amount equal to an ordinary watering. If there be eel-worm, the liquid manure may be alternated with Little's soluble phenyle one in 1,000, or one fluid ounce to  $6\frac{1}{4}$  gallons of water. Do not overcrop young plants, nor allow the fruit to hang too long, as upon attention to this depends in a measure a good and continuous supply. A few seeds may now be sown for a late summer and autumn supply of fruit; they will germinate, and the seedlings be fit to plant out, in about a month.

**MELONS.**—Where fruit is required late, a last sowing may be made for growing in frames or pits, heated by fermenting materials. Make the bed up at once, sowing the seeds in 4in pots—one or two seeds in each—the pots being half filled with soil, and a supply of soil being given as the plant advances, but not higher than half an inch from the seed leaves; they can be turned out when the bed is ready, giving a good watering at planting, and shading from bright sun until established. One plant in the centre of each light is sufficient, its point being taken out at the second rough leaf, this will result in the production of side shoots, which reduce to four, taking two to the front and two to the back of the frame, rubbing off the laterals to within 6in of the stem, and stopping the primary shoots a foot from the sides of the frame or pit. The plants will show fruit on the laterals, which, being fertilised, will set early in August, and ripen towards the close of September.

**SETTING MELONS IN FRAMES.**—Plants that were raised some time ago and have been put out will grow rampantly, and are sometimes difficult to set fruit, especially during moist weather. It arises from the moist atmosphere, crowding, and closeness; therefore thin the growths if too crowded, then fruit will show on the laterals, or if not, stop these to two joints and fruit will appear on the sub-laterals. Water sparingly, pouring what is necessary to keep the plants from flagging between the shoots so as to wet the surface as little as possible. Place hot manure against the sides of frame, or grass mowings will do, with a little over the grass. This will raise a gentle heat, admitting of a little ventilation constantly day and night. Fertilise the flowers when fully expanded, stopping the shoots at the same time one joint beyond the fruit. Admit air freely if the weather permits, increase the ventilation at 70deg, allowing it to rise to 80deg or 85deg or 90deg, at which keep through the day, closing at 80deg, except the small portion before alluded to. When the fruit is set, reduce to three or four on a plant, according to vigour, and encourage growth by watering as required, and sprinkling the foliage at closing time. Commence ventilating from 75deg, allow the heat to rise to 85deg or 90deg. Close before the temperature recedes to 80deg, or between 4 and 5 p.m. Growers who have well-heated, light houses will have no difficulty in maintaining a supply of fruit through October or November from sowings made up to the third or fourth week in July.

**PEACHES AND NECTARINES. — EARLY FORCED TREES.**—Continuous forcing to have the fruit ripe in May and early in June taxes the energies of the trees, as they have to make the growths during the early months of the year and mature them in early summer. After the fruit is all gathered, ventilate to the fullest extent, if possible removing the roof lights by the middle of July, or sooner in the case of very early forced houses if the weather is hot and the growth sufficiently matured. If the roof lights are not moveable, in addition to ventilating to the fullest extent, the borders should be duly damped and properly watered, so as to keep the foliage fresh,

and no check given likely to induce the premature ripening of the young wood and leaves. Keep the foliage free from red spider by syringing occasionally, applying an insecticide, sparing no pains to keep the foliage clean and healthy, thus enabling it to mature naturally. Stop laterals likely to interfere with the principal growths, but moderate lateral extension will promote root action and appropriate an excess of nutriment which, forced into the buds, may result in an undue development. All shoots that have supported fruit and are no longer required, should be removed to let air and light freely to the growths, and if there is too much crowding of the shoots for next year's bearing, thin them well to admit sun for solidifying those left.

**HOUSES WITH FRUIT RIPENING.**—A temperature of 60deg to 65deg at night and on dull days, with 70deg to 75deg from gleams of sun, and 10deg to 15deg advance from bright sunshine is essential to the swelling and securing quality in the fruit. Except on cold nights and in dull weather, little fire heat will be required, but changes come suddenly, and attention must be given to circumstances, so as to maintain steady progress, and admit of a little air constantly for securing flower and good finish. Afford moderate air moisture, but withhold water from the fruit after it commences to soften, damping the floors and borders whenever they become dry, supplying water as required, and a mulching of spent, rather lumpy manure will keep the surface in a moist condition and favourable to the activity of the roots, and that without overdue atmospheric moisture. If the weather be bright, some netting spread over the roof lights will be an advantage in preserving the delicate skinned varieties, such as Noblesse, from unduly heating by the sun's rays, causing the fruit to ripen at the apex greatly in advance of those on the lower parts, and the fruit not infrequently decays there through over-ripeness, whilst the lower part is quite hard. These, indeed all fruits, are better ripened gradually than by being much heated, as is sometimes done under the large and clear panes of glass rightly employed in modern glass structures for growing fruit. A double thickness of herring net, or a single thickness of pilchard net, drawn over the roof lights will sufficiently break the most powerful sunlight, insuring the fruit ripening evenly. The shading may remain on after the fruit is gathered, and greatly conduces to the preservation of the foliage, insures the perfecting of the buds, preventing malformation or premature maturity, and this signifies less danger of the buds falling.

**YOUNG TREES.**—Inattention to disbudding these, or leaving more growths than absolutely necessary for bearing and furnishing the trellis, is a great mistake. The principal branches or shoots to form them should be 12in to 15in distance apart, and the shoots for next year's bearing, originated from the preceding year's shoots, disposed about 15in asunder along them, stopping if necessary at that extent of growth, and the laterals to one leaf as produced. The extension, or main shoots, should be trained in their full length, provided they are evenly balanced. If the shoots are stronger on one side than the other, depress the strong and elevate the weak, so as to induce an equal distribution of vigour throughout the tree. Any gross shoots may be stopped, but it is better to cut out excessively strong wood, as it is difficult to restrain, and often succumbs to gumming, therefore encourage sturdy, short-jointed growths. Ventilate early in the day, increase it with the advancing temperature, avoiding a vitiated atmosphere by leaving on a little air constantly. Essential growths must be trained so that sun and air have access to them freely, keeping them thin and the foliage clean.

### Kitchen Garden.

**BROCCOLI.**—Suitably prepared plants, as, for instance, those which have been transplanted several inches apart in order to strengthen, may now be planted out finally. Those which have been half-starved by crowding in seed beds are a considerable time recovering from the effects of such treatment, and never make good plants in comparison with the better treated plants. All the varieties of Broccoli like good firm ground. For autumn use plant Michaelmas White and Veitch's Self-Protecting. For the winter and main crop there are many excellent kinds, including Cooling's Matchless, Frogmore, and Knight's Protecting, Snow's Winter White, and Osborn's Winter White. For the late crop Cattell's Eclipse, Late Queen, Chelsea Favourite, and Veitch's Model are excellent. For the autumn crop planting may be done on loose but rich ground if firm is not available, but for the winter and spring crops very firm ground is essential. In most cases plant 2ft apart between the rows, the plants being 18in.

**PEAS.**—The early varieties of Peas will now be over, and the haulm may be removed, but the second early varieties and main crop sorts are developing, and should the weather be hot and dry a liberal mulching down each side of rows is very helpful, not only to assist in retaining the moisture in the soil, but to



economically distribute any water or liquid manure which may be found necessary to apply to the roots. A last sowing of Peas may be made, selecting well pulverised and manured ground, and drawing the drills rather deeper than for ordinary sowing, as much dry and hot weather may be experienced at a time when the Peas are needing considerable support. For this last sowing the early varieties only can be depended upon to give good results. A situation sheltered from winds should be chosen. The great enemy to late Peas is mildew, but with generous treatment and ample room this pest may be kept at bay.

**FRENCH BEANS.**—With a good supply of Scarlet Runners these are not so much in demand in autumn, but a few rows may, nevertheless, prove to be useful; therefore, if room can be found it is advisable to sow a row or two in the usual way.

**CELERY.**—The main and late crops of Celery may now be planted. Where there is much in demand, double rows might with advantage be planted, though they are more trouble in managing. The latest rows should be single ones, the plants passing through the winter better, moisture not hanging about them so much. During this month Celery plants are inserted which have become overgrown by remaining too long in the nursery beds. These are long in recovering. Use none but sturdy plants, which lift well from their temporary positions, and properly treated scarcely feel the effects of removal. To established rows of Celery afford adequate supplies of water to the roots, and trim away the suckers which are springing from the base, and remove weeds.

**POTATOES.**—Early varieties may be dug as wanted from the open ground. Remove all haulm from the soil after the tubers have been picked up, and make the surface level.

**ENDIVE.**—A sowing of Endive should be made in drills a foot apart, and on moderately rich ground. Thin the seedlings early and transplant later some of the strongest young plants, hoeing among them frequently to promote growth.

**SURFACE CULTURE.**—Weeds ought to be cut down between growing crops on every sunny day, with the Dutch hoe. If the ground has been trodden hard between Beans or other crops it may be necessary to bring a fork into use to loosen the soil.

**MUSTARD AND CRESS.**—Sewings of these may be made frequently outdoors in a shaded position, sowing on the surface, shading and maintaining moist.

## Young Gardeners' Domain.

### *Eucharis grandiflora*

How seldom we find these beautiful and useful flowering plants grown as they deserve to be in gardens of note. At Christmas and New Year few of our inside flowering plants are more useful than the *Eucharis*—a time of the year when the country mansions are filled with parties, and flowers are greatly in demand for table decorations. *Eucharis* flowers and foliage of *Pancratium fragrans*, or small *Richardia* leaves, may be used, the flowers lasting for a long time after they are cut if a small portion of the stem is taken off every few days. I think many failures may be put down to three things—viz., not sufficient water, too much drying off at the roots, and too much heat. Our mode of culture may surprise some. When the plants require to be potted they are given good fibrous loam and a sprinkling of bonemeal and sand, and a good drainage in the pots. Once a plant is established it is best left alone for four or five years and not disturbed, for if so it will most likely cause a failure. I think when once you have got *Eucharis* in good health and doing well leave well alone. The chief aim should be to get the pots filled with healthy bulbs and roots, and then, with liberal feeding, they can be kept in good condition for several years.

We find liquid manure from the cowsheds and soot water as good as any manure. This is applied once or twice weekly. The plants are kept well supplied with water right through the year, never once allowed to become dry at the roots. Most growers keep them on the dry side, or, rather, withhold water from them for a time. But we never do this. Twice and three times during the season we get them to flower. But Christmas is the time we get the most and best spikes, most of which are over a yard in length with six and seven flowers on them. With regard to temperature, an intermediate one is suitable, with the glass about 50deg at night during the winter months. This is where the plants are grown the whole year round. They are also grown under the stages, with water always under them, and seem to delight in it. We are seldom without a few spikes of *Eucharis* at any time from these plants.—J. B., Bucks.

## Trade Catalogues Received.

M. Herb (formerly Herb and Wulle). Bulb and Seed Grower, Naples.—*General Catalogue of Bulbs.*



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**CURRENT LEAVES FALLING (J.).**—Probably the bushes have been suffering from drought, which the recent rains would no doubt assist materially in remedying. If the bushes are old and weak a mulching of manure or a good supply of liquid manure would prove beneficial.

**WEED KILLER (Idem).**—There is no such thing as a non-poisonous weed-killer, for what will kill weeds will destroy useful crops, it being only a matter of degree, some plants being more susceptible of injury than others, and the articles are poisonous, though not likely to cause injury to man or useful animal life when applied according to the instructions. We advise a solution of carbolic acid, No. 5, in 100 parts of water, for killing weeds on walks, pavements, &c., distributing by means of a rose watering can, and keeping from grass, Box, or other edgings, for the acid is no respecter of vegetation. Avoid getting the acid on the hands, even the diluted article, or it will injure the skin.

**GOLDEN-LEAVED FUCHSIA TURNING GREEN (Amateur).**—Most likely your plant is turning green in consequence of having been recently potted in a richer material than that in which it was before, whereby a degree of grossness is induced fatal to variegation both in this and in many other plants. We are unable to maintain the golden colour in our Japan *Euonymus* when they are planted out of doors, and it is the same with many other plants. In the case of your Fuchsia, if it is not placed in too large a pot we would not disturb it now, but wait until the pot be filled with roots, and most likely the proper colour will be restored as the plant's vigour becomes checked. Water also sparingly, and do not let the plant flag.

**ARTIFICIAL MANURE FOR VINES (T. Q.).**—The Vines that are carrying good crops would be benefited by a top-dressing of fertiliser, the final one being given at the completion of the stoning process, so as to help the Grapes in their last swelling and profit the Vines in storing matter and perfecting the buds for next year's crop. Of the three articles you mention, namely, bonemeal, dissolved bones, and Thomson's Vine manure, the latter would be most serviceable, as it is a good all-round fertiliser; but as you may have used this and may prefer something different, you may prepare a mixture of five parts of dissolved bones, dry and crumbling, 2½ parts sulphate of potash, and 1 part sulphate of magnesia, mixed, applying 4oz of the mixture per square yard, and pointing in very lightly, afterwards watering in moderately. This will help the Vines to finish the current crop and material remain for use in the future.

**GRAPES FOR EXAMINATION (One Perplexed).**—The berries are both shanked and scalded, the former represented by the withered footstalks and the latter by the depressed spots, the other part of the berry remaining green and sound. The shanking is generally due to a bad condition of the roots, the soil having become sodden and sour, for which lifting is the most satisfactory, or it may in the case of an old Vine not be possible to so act, or only partially, removing the soil from amongst and over the roots at the collar and supplying fresh loam or compost in place of that removed. This practice we have known to effect wonders with old Vines, new roots being encouraged from the collar, and they extend outwards near the surface, and the Vines profit accordingly. This should be done in late summer, as soon as the leaves give indications of ripening. If you cannot do either, apply a good dressing of air-slaked lime, say 2lb per square yard, and leave on the surface, or if objectionable in appearance cover with a little soil, very little, or better not any. The lime will act to some extent as a corrective of the soil sourness, as some lime will enter the soil in solution, and very often the roots of the Vines come up into it. The scalding can only be prevented by admitting a little air constantly and increasing it before the sun has acted on the house, so as to raise the temperature considerably, moisture being condensed on the berries, and these heated, scalding ensues. It never occurs outdoors, therefore admit air freely and keep moisture from the berries even if a little extra fire heat has to be employed. We should say there is too much moisture in the house, this being kept too close and moist, therefore ventilate early and freely, though too late for this year.

**MARECHAL NIEL ROSE LEAVES DISEASED** (A Young Beginner).—The leaves appear to be attacked by orange fungus, to destroy which dissolve 2oz of blue vitriol in hot water, and then add 3 gallons of cold water, and with this sponge the leaves or syringe the tree; and as the fungus is chiefly on the under side of the leaves care should be taken to wet them there with the solution. Supply liquid manure, and if planted out mulch with partially decayed manure. Softsoap at the rate of 4oz to the gallon is also good against the parasite, but not nearly so effectual as the vitriol water.

**STRAWBERRIES EATEN BY SLUGS** (J. P., Dublin).—We do not know what you can now apply to prevent the fruit being eaten by the slugs; but you may raise the fruit above the ground or mulching material by some forked sticks thrust into the ground, and place the trusses so that they rest in the fork of the sticks. This will save the majority of the fruit. Securing the trusses of fruit to small stakes will answer nearly as well, but is more tedious. We use crinolines formed of galvanised wire, which answer perfectly, not a fruit so far as we have observed being eaten by slugs.

**FLIES AND CATERPILLARS TO NAME** (H. R., Kent).—The fly with the long, narrow body is a *Pembla*, one of the *Ichneumonidae*, which, by its larvæ, is parasitic on grubs or maggots of other insects that burrow and live in old wood, such as old posts and palings, hence it has the best possible right to protection. The brown insect resembles the scorched wing moth, *Eurymene dolobraria*, but both insects were very much rubbed. Its caterpillars feed on Oak and Beech trees. The caterpillars are those of the common tiger moth, *Arctia caja*, which feed on a great variety of plants in gardens, and commonly known as the "woolly bear," from its dense coat of long hairs.

**VINES ON LONG ROD SYSTEM** (H. S.).—The Vines should have the eyes rubbed off so that the bearing shoots (not laterals) are 15in to 18in distance apart. This is essential to admit light and air to the bearing shoots to insure the proper development and finishing of the crop. The most probable cause of the shoots having in some cases more vigour than others is their taking the lead and exhausting the stored-up sap in the rod, and though the three most vigorous canes have been detached, the remaining ones having no such supplies to draw upon are comparatively stationary. Another reason is that the flow of sap is most abundant at the upper part of the cane or rod, and the shoots are consequently most vigorous. The Grapes are scalded, which is due to the sun or heat acting on the berries whilst covered with moisture. When Grapes begin colouring they should have a little ventilation constantly.

**NECTARINES DISEASED** (J. H.).—In the absence of information as to the condition of the trees and the soil of the border in which it is growing we have some difficulty in arriving at a correct solution of the cause of the disease which has attacked your fruit. The probability is that it arises from an impaired constitution of the tree, and we are led to this supposition because of the small size of the fruit. This want of vigour may have been caused by successive attacks of red spider, which destroy the functions of the leaves. Perhaps you may have observed the leaves looking sickly, and the young wood after the leaves have fallen destitute both of fruit and leaf buds; if so the trees have suffered from this pest. Has the house received sufficient air? These disease spots are often produced by inattention to this. Look to the border and see that the drainage is perfect, and the soil open and porous, with a proper admixture of calcareous matter.

**MELONS NOT SETTING** (W., Herts).—Plants growing in frames placed on manure are not infrequently very vigorous from the roots of the Melons passing through the soil into the rich compost below, and over-luxuriance is not favourable to the setting of the fruit. The only course we can recommend you to pursue is to remove some of the strong growths, so that those remaining are so thinly disposed that the sun can shine on every leaf. Tread the soil very firmly, being very careful not to injure the foliage, and do not give any water for some days, or only just sufficient to prevent the foliage flagging. If the ends of the main shoots are cut off when they reach nearly to the sides of the frame, the axillary growths following will produce pistillate flowers, to which pollen should be applied from the staminate an hour after the frame has been opened in the morning. The fruit-bearing laterals should be pinched at one leaf beyond the flower immediately the latter is seen, and before it expands.

**EDITORIAL NOTICE.**—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

## Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.         | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.    | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|---------------|--------------------|-------------------------|-----------|-----------|-----------|----------|---------------------------------------|----------------|----------------|------------------------------|
|               |                    | At 9 A.M.               |           | Day.      | Night     |          | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|               |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |          |                                       |                |                |                              |
| 1902.         |                    |                         |           |           |           |          |                                       |                |                |                              |
| June.         |                    |                         |           |           |           |          |                                       |                |                |                              |
| Sunday ...22  | S.W.               | deg. 62.4               | deg. 57.0 | deg. 69.0 | deg. 46.8 | Ins. —   | deg. 59.2                             | deg. 56.9      | deg. 53.7      | deg. 39.5                    |
| Monday ...23  | W.S.W.             | 65.4                    | 58.2      | 73.6      | 54.0      | —        | 60.6                                  | 57.3           | 53.9           | 50.6                         |
| Tuesday ...24 | S.W.               | 66.4                    | 61.8      | 79.8      | 52.0      | —        | 61.5                                  | 58.0           | 54.2           | 46.3                         |
| Wed'sday 25   | S.E.               | 67.9                    | 60.6      | 71.2      | 58.3      | —        | 62.5                                  | 58.7           | 54.3           | 51.0                         |
| Thursday 26   | S.E.               | 70.9                    | 59.5      | 74.7      | 56.2      | —        | 62.6                                  | 59.3           | 54.7           | 46.0                         |
| Friday ...27  | S.E.               | 72.9                    | 62.0      | 79.0      | 56.0      | —        | 62.7                                  | 59.5           | 55.0           | 43.5                         |
| Saturday 28   | S.E.               | 75.6                    | 63.5      | 81.5      | 57.2      | —        | 63.2                                  | 59.8           | 55.2           | 43.3                         |
| MEANS ...     |                    | 68.8                    | 60.4      | 75.5      | 54.4      | Total. — | 61.8                                  | 58.5           | 54.4           | 45.7                         |

A remarkable change has taken place in the weather. The cold cheerless weather of a week ago has given place to bright sunny skies, and the past week has been hotter by 6degs. than the average for the previous three years for the same week.

### Publications Received.

"Garten Flora," June 15. \* \* "The Canadian Horticulturist" (Toronto), June, 1902. Special features: Thinning Plums; Luther Burbank; Easter Beurré Pear; Rose Pests; Some Peculiarities of Fruit Spurs; Spraying Demonstration; and Apples and Their Enemies. \* \* "Irrigation Farming," a handbook for the proper application of water in the production of crops, by Lucius M. Wilcox: New York, Orange Judd Company, 1902. \* \* "British Advertiser," Vol. I. No. 2, June. Contents: Why Some Advertising does not Pay; Education and Advertising, &c. \* \* "University of California—College of Agriculture": 1. Lands of the Colorado Delta in the Salton Basin; Bulletin No. 140; 2. The Native Vegetation and Crops of the Colorado Delta in the Salton Basin (Supplement to Bulletin 140); 3. Citrus Fruit Culture, by J. W. Mills (No. 138); 4. Orange and Lemon Rot, by C. W. Woodworth (No. 139). The two latter are well illustrated. \* \* "The Journal of the Department of Agriculture of Victoria," May, 1902. Chief Contents: Tobacco Plants grown at the Government (Dookie) Farm; Masked Wood Swallow (coloured plate); table and drying Grapes; Dehorning Grade Dairy Herds; The Continuous Wine Press; Frozen Produce Exports. \* \* "Revue Bibliographique des Sciences Naturelles, pures et appliquées." \* \* "Cassell's Dictionary of Gardening," Part 14, price 7d. net: Coloured plate of Hollyhocks. Begins at Onithidium to Phyllocactus.



## Canada, Britain's Granary.

Such are the words emblazoned on the triumphal arch erected by that Colony in Whitehall for the Coronation. That there is much strength in Canada's claim to the title may be readily allowed, but if we include future possibilities it should be well-nigh unassailable. Unlike so many other new fields of culture, there is neither lack of water nor of drainage, the chief and only drawback being the long and severe winter. That frost is not the worst enemy of the agriculturist we most of us know, for in this country the finest crops generally follow the severest winters. No amount of labour can produce such a fine tilth as Nature does by refrigeration.

A copy of a Canadian paper the "Winnepeg Telegram," has recently reached us, and the information contained in its pages is most interesting and valuable. Winnepeg is the capital of Manitoba, and it is only with that province of the Dominion that the journal in question deals; but the



capabilities of Manitoba as a producer of food are so enormous that the remainder of the Dominion seems insignificant by comparison. Manitoba itself, if properly cultivated, might in reality become "England's granary," and now that statesmen are whispering of possibilities of Britain being starved into submission to the foreigner, it is surely not premature to suggest the co-operation of her Colonies in preventing any such humiliation.

The Boer War has done much to foster an Imperial spirit, but the shadow only will have been grasped, and the ripe fruit missed, if Imperial commerce does not follow the flag. The Chancellor of the Exchequer has ventured to place duties on imported grain and feeding stuffs in order to produce a million or two of revenue, whilst at the same time pessimists are looking forward to a period of famine for want of food supplies. If there is any fear of such a famine it would surely pay this country to give preference to Colonial supplies, so as to encourage production under the flag. It is not absolutely impossible for us to produce our own bread, but it is economically so, for we cannot do so except at the sacrifice of other products which are now more largely in favour, and therefore it is fair to suppose more lucrative to the producer.

We have noticed that all proposals in favour of an Imperial Zollverein or Customs Union are severely snubbed by the powers that be. It seems hardly credible that Mr. Chamberlain can acquiesce in import duties on grain and at the same time object to reciprocal tariffs between the Colonies and the Mother Country. It seems to us such a desirable thing from a business point of view that the Empire should be self-supporting if Great Britain cannot be. To show what might be done by preferential tariffs in promoting grain production in Canada, we will quote a few statistics from the "Winnipeg Telegram." The area available for farming in Manitoba is twenty-five millions of acres, of which not quite three millions are now under cultivation. The soil is of very uniform character, and will grow both Barley and Oats as well as Wheat. The average production of Wheat during the last ten years has been 19,928 bushels, or nearly twenty bushels per acre; whilst in 1901 the average was twenty-five bushels per acre, or very little below our British average. This amply shows that under good and regular cultivation the land would be most productive, for the United States' average for ten years was less than fourteen bushels per acre—not much more than half the Manitoba crop of 1901.

The "Telegram" gives an estimate of the cost of growing Manitoban Wheat as follows:—

|  | Dollars. |
|--|----------|
| Ploughing once ... ..                      | 1.25     |
| Farrowing twice ... ..                     | 0.20     |
| Cultivating twice ... ..                   | 0.40     |
| Seed ... ..                                | 0.75     |
| Drilling... ..                             | 0.22     |
| Binding... ..                              | 0.33     |
| Twine ... ..                               | 0.20     |
| Stooking ... ..                            | 0.16     |
| Stacking ... ..                            | 0.60     |
| Threshing ... ..                           | 1.46     |
| Teaming for market ... ..                  | 0.29     |
| Two years' rent or interest on land ... .. | 1.80     |
| Wear and tear of implements ... ..         | 0.20     |

7.87 dollars.

A dollar is equal to 4s. 2d.

This was the cost of growing an acre of Wheat at the Government experimental farm at Brandon. The result was a crop of twenty-nine bushels per acre, which, at fifty cents per bushel, realised \$14.50, and left a profit of \$6.63, or, in English money, 27s. 8d. per acre. If, however, we take the average of the 1901 crop, viz., twenty-five bushels at fifty cents equals \$12.50, the profit would have been only \$4.63, or 19s. 6d. per acre. If we go still further back, and take the average of the last ten years, twenty bushels, at fifty cents, we get \$10 gross, and but \$2.13 profit, which is somewhere about 8s. 10½d. per acre. In any case, there would appear to be a fair profit for cultivation as things are now, and a very little preferential encouragement would lead to very extended cultivation of the twenty-two millions of acres which are still growing prairie grass.

Oats, on an average of years, have yielded thirty-four bushels per acre, and in 1891 they reached forty-eight bushels. Barley has averaged 26.54 bushels per acre, and has reached as much as 36.69, whilst in most seasons it is

of fine colour and good malting quality. The farmers of Manitoba find that mixed farming pays better than Wheat growing pure and simple, and they are largely increasing their herds for dairy purposes, the production of butter and cheese being highly profitable; whilst the encouragement thus given to cattle breeding must largely result in increased production of store cattle as well as beef. In view of graziers' difficulties in obtaining store cattle in this country, surely under suitable restrictions we might allow our Canadian cousins an entry into our store stock markets. Let them show us a clean bill of health, and we in return for similar freedom of their markets, should give them entrance into ours.

Other crops may be grown, but the above are those which concern us most. As we must have supplies of Wheat, Barley, Oats, &c., which we cannot grow, and also butter and cheese, which we might grow but do not, why not let our Colonies have the first refusal of our market? If we are to have import taxes on food let us give our Colonial brothers a rebate, and so encourage that most stable of influences, commercial interest.

### Work on the Home Farm.

The sad illness of His Majesty the King threw a great damper on the spirit of rejoicing in our rural districts. The teas, &c., were proceeded with, but in a half-hearted way.

A week of fine hot weather has been grand for the crops. It has stiffened the growth wonderfully, and there are now few symptoms of over-sappiness. The sudden change has made us very busy, for work amongst roots would not hide delay. The land left to itself would soon have been like a brick, so the Mangold and Turnips are being all scuffled over, and a few of the Potatoes treated in the same manner. Some of these which had been hilled up when hardly dry enough would have set very tight. We have scuffled them down, and shall earth them up again at once with the light earthing plough and one horse. It would not do to take two horses amongst such big haulm. Turnips generally look well, and there is little or no fly. The earlier Swedes are ready to thin out, and that will be the next work.

The hot weather has matured the Clover crops, and we shall at once commence cutting and make hay while the sun shines. We have seen a field cut, but the crop did not look heavy.

Potato spraying must be done at once now if it is to be done at all, but it has been almost discontinued in these parts. Two years ago, when there was disease, the spraying was inoperative through the action of heavy thunder showers quickly following the spraying process. Last year there was little disease and practically little benefit to gain. So farmers who are hard of belief in the efficacy of new systems have soon lost the little faith they had. A really bad disease year would do much to reconvert them. If a field or a portion of one only were sprayed this year it would be useful as an experiment, and it is not yet too late.

There is plenty of grass for all stock, but not much to spare in many of the sheep pastures. Some of these thinly planted seed fields might easily be spared, for they are not carrying much stock, and if ploughed up at once they might bring a nice crop of white Turnips for spring use. If left as they are a while longer and ploughed for Wheat a good seed bed might be had, but a good manuring would need to be ploughed in, for there is little in the way of Clover root to stimulate a Wheat crop, whilst when seeds have been poor there is generally a good supply of twitch.

### Utilising Waste Products.

The discovery (says the "Morning Post") of valuable uses for what were at one time regarded as waste products has been one of the most interesting features in the scientific and experimental progress of the past quarter of a century. According to a statement in the May circular issued by the West India Committee another discovery of this description has been made which promises to solve a problem that has long been vexing the sugar planters. The advantageous disposal of the centrifugal molasses has puzzled the sugar planters for many years, but it is believed that a process has been found whereby this and megass mixed can be profitably utilised as a food for cattle. The new food has been named "molascuit," and is believed to be worth £6 to £7 per ton, its local realising value being already £5 to £6. The mixture consists of 20 per cent. of fine and absolutely dry cellular fibre of the Sugar Cane, and 80 per cent. of molasses—in fact, the original juice in the cane is replaced by the molasses. It is claimed that a great advantage of the process lies in the fact that this cattle food can be shipped in bags and in a condition that commends its use to the British agriculturist. The discovery may be of considerable importance to stockowners in this country, who have to obtain so large a proportion of their supplies from abroad, and a properly planned experiment with it would be followed with widespread interest.

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See Report in this Paper of May 22nd.

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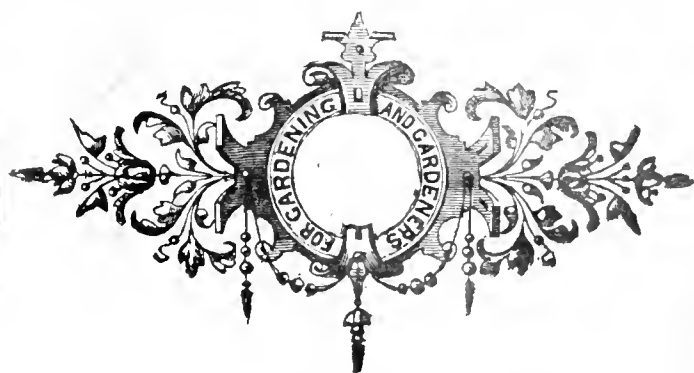
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## Journal of Horticulture.

THURSDAY, JULY 10, 1902.

## Crossing among Cabbages.

HERE is a desire on the part of many growers to save their own seeds of certain kinds of vegetables, such thoughts being inspired when, among a plantation, there appears an unusually good form of either Cabbage, Broccoli, Cauliflower, Savoy, or other kitchen garden plant. It may be distinguished as being early or late, good in colour, well shaped, or, in the case of Broccoli, perfectly protected, wherein is found the ideal of one's aspirations. Whatever may be the distinguishing mark which stands out so conspicuously, leading the owner into a vein of prospective gain in quality or value, all hopes and gains may be shattered if, when the flowering stage is reached, no provision is made against insect interference. Bees are great factors in the shattering of prospects and the mixing of kinds in the vegetable world, for, in their search after pollen grains, they may, and do, invade large tracts of land, where there may happen to be isolated plants, perhaps left for seed, or breadths of flowering Brassicas awaiting the gardener's opportunity to remove them. In such cases the owner of the fostered seed-plant runs great risks of losing his anticipated ideals if he allows the flowering stage to progress without applying muslin or bee-proof tiffany to divert the agency of bees and other insects from mixing the pollen grains.

Lessons such as these come from acquired experience, and in these matters the old adage finds truthful expression, "Experience bought is better than experience taught," for once such facts become realised, they make a lasting imprint on the memory. This happened with the writer a few years since, when, possessed of a particularly good stock of late spring Broccoli, the idea of

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perpetuating it for future use, some selected plants were left for seed. Precaution was taken that no other of the Cabbage kind was in flower at the same time in the garden, which was made easy, because the Broccoli selected was of the latest kind, and no necessity existed for having others about. This protection, however, did not prove sufficient, for plants raised from these chosen seeds developed every good hope until near their time of maturity, when it was discovered they were an entirely new order of vegetation, but without a value. In other words, they furnished neither a Broccoli nor a Cabbage, though they resembled the latter the most up to a period when they should at least have been useful. The growth of a planting of these for late use must, even in a large garden, inflict loss, disappointment, and probably a break in the succession at a most important period of the year. The loss was the greater because the whole was of the same useless character, and the resolution of the time found expression in the abandonment of home saved seed stocks.

Time, however, works many changes, both of will and purpose, and the retrospect bring into light the folly of self-confidence in the "natural order." Probably, had these isolated plants been perfectly guarded by a tiffany case, the ideals so well cherished would have found fresh channels and good resolutions have remained sound.

The record of such failures may at the present time, when some among your many readers are bent on similar gains, be a useful reminder of the improbable, and those who may already have plants in an advanced stage of seed growth will see the unwisdom of placing any confidence in the venture, if neglect of this item of routine has been allowed, that is, in districts in which bees, domestic or wild, abound.

One's own garden may be free from foreign stocks, but others may not be, and the distance covered by bees cannot be easily estimated from which they may carry infection. To the fruit grower in spring time bees are welcome aids to the successful fructification of the varied kinds in flower time, and to the vegetable gardener no inconvenience arises except in an instance where a pure stock is sought and required.—W. S.

## The Value of Apples.

His Majesty the King has been advised by his medical men to partake of English Apples. No Apples taste so well to Englishmen as those grown within the United Kingdom, and the fact that the highest medical doctors have ordered them at this time of the year from a Herefordshire grower would emphatically suggest that home-grown Apples contain something which the best of foreign ones lack. The variety sent to Buckingham Palace for the use of the Royal patient was reported to be Dumelow's Seedling, better known as the Wellington Apple.

In Albert Broadbent's little book, entitled "Fruits, Nuts, and Vegetables" (6d. net, Manchester), we find it stated that "the composition of the Apple consists of much water, vegetable fibre, albumen, sugar, gum, chlorophyll, malic acid, and lime. Eaten uncooked and well masticated, it is easily digested. German food-chemists state that the Apple contains a larger quantity of phosphates than any other vegetable or fruit. The Scandinavians called it the 'Food of the Gods,' and believed it possessed virtue to renew both mind and body. With rare exceptions, Apples are good for those disposed to gout and sluggish liver, and those who follow a sedentary life. Two or three eaten at night—uncooked or baked—correct constipation. I know several cases that I had under my personal observation in which baked or roasted Apples, eaten with brown bread toasted and buttered cold, were enjoyed and digested when all other food gave great pain, and thus prepared the way for ultimate recovery. It should not, however, be assumed that baked Apples will cure every dyspepsia. Rotten Apples used as a poultice is an old Lincolnshire remedy for sore eyes. The juice of Apples without sugar will often reduce acidity of the stomach, becoming changed into alkaline carbonates, and thus correcting sour fermentation. It is stated on medical authority that in countries where unsweetened cider is used as a common beverage, stone or calculus is unknown; and a series of inquiries made of doctors in Normandy, where cider is the principal drink, brought to light the fact that not a single case of stone had been met with during forty years. The Normans introduced cider Apples into Hereford, and any chance case of stone if found in a Devonshire or Herefordshire hospital is regarded by the doctors as a sort of professional curiosity imported from a distance. It may, therefore, be fairly surmised that the habitual use of natural unsweetened cider keeps in solution matter which is otherwise liable to be separated in a solid form by the kidneys. How much better the fresh ripe fruit may be."

## Seasonable Hints on Vines.

During a season like the present, when a long period of cold, wet, sunless weather is suddenly followed by bright, hot days, the Grape grower has to be on the alert to prevent the scalding of both leaves and berries, and by good management generally to get full benefit from the present favourable climatic conditions. At one time it was usual for writers to denounce in the strongest possible terms the practice of shading vineries under any condition, and although shading is not generally to be commended, there are circumstances under which I have proved over and over again the wisdom of doing so. Those who have houses with metal roofs know too well how greatly Vines grown in them show signs of distress when the sudden changes already referred to occur, and if a light shade is then applied to the roof the Vines at once feel relief, and are thus able to perform their functions the better.

In modern houses constructed by wood and glass the panes are generally very large, and should the Vines happen to be trained within 15in or 18in of the glass they suffer considerably during bright bursts of sunshine, and are benefited by a slight shade. Finely powdered lime, or whitening mixed with milk, forms a suitable shading compound, which is generally ready at hand and can be quickly applied with a syringe. The important point is to give a very light coating at the first application, as it is easy to add more if bright weather continues, but not easy to remove the surplus if too much is given.

Again, it is almost impossible to retain for long, without shading, the colour of Black Hamburgh Grapes, which are ripe at this season, and in such instances a much heavier shade may with advantage be given. This, of course, is to be removed as soon as the Grapes have been cut.

Many cultivators of Gros Colman seem quite unable to keep the leaves fresh and healthy-looking till the Grapes are ripe, and I quite expect to hear many complaints about the leaves turning brown and "cupping" after the sudden atmospheric changes recently experienced. I think I can give a few hints about this matter which may be of service to many. The leaves in the early stages being extremely tender cannot endure rapid evaporation without injury, and anything which tends to lessen evaporation helps to preserve their freshness. When hot weather sets in it is usual to greatly increase the amount of air given at the bottom or side of a vinery, and when this is done in houses where Gros Colman is grown the leaves begin to assume that undesirable brownish tint and their edges turn upwards.

Very little, if any, bottom air should be given to this variety until the Grapes begin to colour. Instead, a slight shade should be applied to the roof when hot weather sets in, and top ventilation given very early and increased gradually; then, with due attention to watering, feeding, and damping, this fine Grape should be grown to perfection. I have never known the berries to become really black when the foliage has been badly discoloured.

With all varieties it will be necessary to keep a sharp look out for red spider, and the eye which detects the beginning of an attack while it is confined to a few leaves may often be the means of preventing much subsequent trouble if such leaves are thoroughly sponged with an insecticide at once. Sometimes this troublesome pest seems to attack one or two Vines in a house suddenly, and I have then often been able to get rid of it entirely by syringing the foliage heavily a few times.

At one time I was afraid to either practise or recommend syringing Vines for fear of disfiguring the Grapes, but some years ago I became convinced that if clean soft water were used the operation could be performed without the slightest injury to the bloom or the berries, and I have syringed after the Grapes have begun to colour. In order to be effectual the water must be forced sharply on to the under side of the foliage; then, as it falls, it will not disfigure the Grapes. It is only when the operator fails to aim straight, and catches the bunch, with the water direct from the syringe, that damage is done.

In the case of a bad attack which is general throughout the house a strong fumigating with XL All on two successive nights will usually kill every red spider present. I have found this method perfectly effectual with Black Hamburgh Grapes, but it is seldom safe to fumigate Muscats, Lady Downe's, or any of the thick-leaved kinds sufficiently strongly to kill the insect without injuring the foliage. In one instance, however, I fumigated a house in which there were two Muscat Vines. Yet, strange to say, they were quite uninjured, although the insects were effectually killed.

In conjunction with the above practice for getting rid of insects, steps should be taken to keep the roots active by due attention to watering and feeding, as, without active roots, insects will become troublesome again and again, and it is for this reason that I have frequently recommended, and now reiterate, "always allow a little lateral growth to be constantly going on," in preference to removing every young shoot on a Vine when stopping is being done.—H. D.

**Lælio-Cattleya × Nysa.**

This splendid acquisition has been shown by the raisers, Messrs. James Veitch and Sons, Limited, Chelsea, for a number of years now, and its merits are more than ever appreciated. The plants are of robust habit, with stems 6 inches long, and stiffish leathery leaves, almost as long again as the stems. The parents were *Lælia crispa* and *Cattleya Warscewiczii* (*C. gigas*), and the flowers approach in form, size, and colour those of the cross *C. × exoniensis*.

The sepals and petals are soft lilac-pink, the side lobes of the lip being yellow externally, and have a deep purple blotch at the apex on the inner side. The front lobe is rich crimson purple, shaded with maroon, and with a paler, crisped edge. It received an Award of Merit from the Royal Horticultural Society.

**The Week's Cultural Notes.**

Most of the stems of *Thunia Marshalliana* and similar sorts that are going to flower this year will have done so by now, and it is no use keeping them any longer in heat, the flowerless stems elongating unnecessarily. They should go at once into a sunny and comparatively dry house, and water at the roots must be gradually withheld as the foliage ripens and falls. In winter these plants are absolutely dormant, and if room is scarce they may be turned out of the pots, the most of the dead roots cut off, and the stems tied up in bundles. They may then be suspended in any warm, dry house or shed, where the temperature in winter does not fall below 50deg.

*Calanthes* are growing now very freely, and must be seen to in the matter of room, so that every portion of leaf gets its full share of light. As a rule the plants will need moving, say once a fortnight, this preventing overlapping of the leaves, and consequent damping. The roots are very active, and must be afforded copious supplies of water. In some cases, where grown in small pots, a little manure water may be necessary, but it is easily overdone, and the large plethoric pseudo-bulbs obtained by liberal feeding do not as a rule flower any more freely than smaller, well ripened specimens. The former, too, are more likely to be attacked by spot, that inveterate foe to *Calanthes*.

That lovely Orchid *Miltonia vexillaria* will soon have finished its growth, many plants having already done so. This will mean a slight slackening of the root moisture, but nothing like a dry regime must be practised or the result will be apparent in

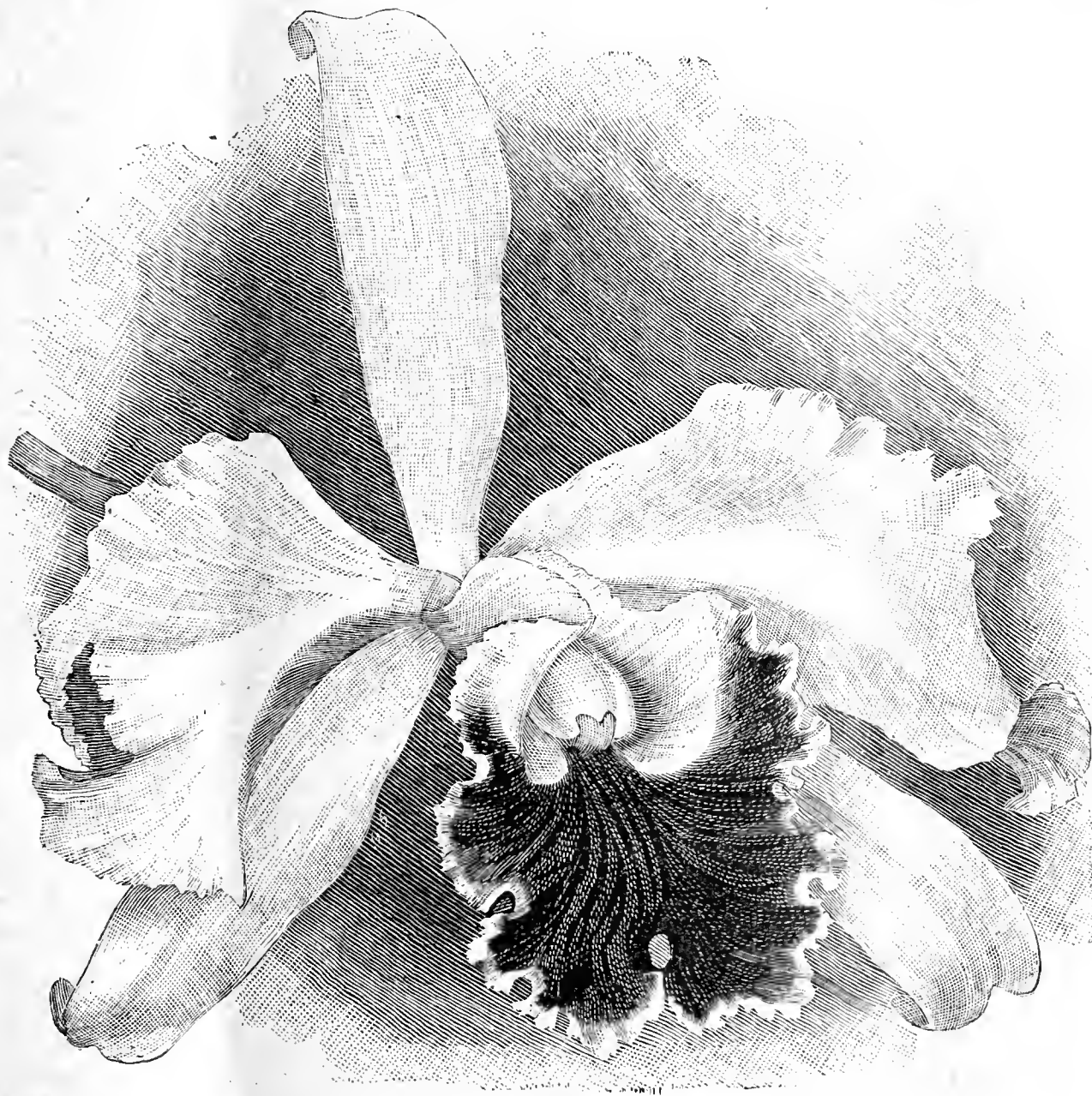
shrivelled growths. But this is, perhaps, the quietest season for them, and may be taken advantage of for a thorough overhauling and cleaning. Thrips are very apt to attack this beautiful species, and careful sponging and dipping in tobacco water and soft soap are to be recommended whether insects are visible or not.

Plants of *Lælia purpurata* that have flowered should be assisted by ample root moisture to finish up their growth where this is not quite done. Where the pseudo-bulbs are complete endeavour to keep the plants quite dormant by giving plenty of air and light and not pushing the heat unduly. Plants that are growing sluggishly all through the winter never flower freely or well, but those on the other hand that are kept dormant grow and eventually flower much more strongly for it.—H. R. R.

**Two Cypripediums.**

*Cypripedium Svend Brun*, which is a cross between *Lowi* and *Curtisi*, is of recent introduction. The petals and pouch are a

most intense wine colour, the former beautifully spotted with dark brown. The dorsal sepal is very much like that of *Curtisi*. The leaves are leathery and slightly tessellated. *Cypripedium Lebaudy-anum* is one of the finest of this interesting genus, and was raised in the collection of Robert Lebaudy, of Bougival, Belgium. The seed was sown in 1890, and the first flower appeared in 1895. It is a cross between *Hayaldyanum* and *Philippinense*. While both of its parents are of extremely slow growth their progeny develops much more rapidly, the growths usually being completed within a year and flowering freely. I have flowered this plant, writes J. E. Rothwell in "American Gardening," each year for the past three years, and the new growth now developing seems to be the strongest it has

**Lælio-Cattleya × Nysa.**

ever had. The peduncle, usually about 2ft in length, generally bears four flowers, although sometimes it carries five. The blooms are almost exactly intermediate between these parents, and are larger than either. Pouch is a beautiful soft yellow, the sepal white and pale green, with stripes and spots of crimson, and the mauve-tipped petals are also beautifully spotted. The flowers last a long time, all remaining perfect for about six weeks. Altogether it is a thoroughly first-class *Cypripedium*.

**The Persian Lilac.**

In fragrance and general beauty the Persian Lilac may be considered the equal of the ordinary garden varieties; but it is not so well adapted for cut-flower purposes—one of the chief charms of the old-fashioned Lilac. Cut and placed promptly in water, the Persians last but a short time. The white Persian Lilac is not considered as pretty as the purple. Occasionally it runs back to the purple. Both make handsome, symmetrical bushes, and are very floriferous.



## The Horticultural Hall.

The Royal Horticultural Society's Temple Show and great exhibition at Holland House, having now passed, the Council have formally made an appeal to the 6,000 Fellows of the Society on behalf of a fund to meet the coming expenses in the erection of a hall for the fortnightly shows and committee meetings. It is unnecessary at this period of the Society's history to recapitulate all that has been said in favour of the provision of a hall—a home—for the mother society, the predominant centre of British horticulture. Those who regularly attend the present Drill Hall at Buckingham Gate are well aware that it has many failings. It is frequently too limited in space for the groups and tables of exhibits, it is badly lighted, noisy, cold, and draughty in spring and winter, and unbearably overcrowded by visitors during the earlier summer months.

The patrons of horticulture who so largely attend the Drill Hall meetings certainly do not enjoy the jostling (which is inevitable at present) any more than we do, and it is for these powerful reasons and others that could be given that a general subscription on behalf of an imperative object is necessary. It is hoped that the Council's appeal will meet with the heartiest support, and judging from what has already been promised, and from the resources yet to be drawn upon, we have not the slightest doubt, and never have had, but that finances will be equivalent to the Council's requirements.

From £25,000 to £30,000 is expected, and it is for the Council to see that no more than the higher sum will be spent altogether on the hall. The amount is quite sufficient for the building of a spacious and perfectly suitable hall. The sum already contributed before solicitations have been made amounts to over £13,000, which prognosticates well.

## Improvements in Hardy Plants.

(Continued from page 7.)

I will now hastily run through some of the most important families that I think should be dealt with, and the first on the list will be the

Aster, the capabilities of which are endless, and I believe before many years they will become one of our most popular families and be grown by millions, both in pots and in the open. In a very short time we shall have as many pinks and reds as we have blues and whites, and Perry's Pink, one of the *lævis* section, is a fine one to work from the colour being a good bright pink and the first of this section of a good colour. It is a seedling raised from Miss Stafford, a Winchmore Hill Variety. Great care must be exercised in raising Asters to keep to the stick-at-home varieties. Do not touch those that run all over the border. A favourite group of mine is the *cordifolius* section, forming sheaves of the most graceful flowers, and favourites with everyone for cutting. I find this group is far better grown in partial shade. The *Amellus* group will take a first place for pots, their natural habit lending themselves to this mode of treatment. The flowers are large and of every shade, from the richest violet imaginable to very pale blues. The white we have is of no use horticulturally, but what the progeny will be I do not know. In Perry's Favourite we have the first good pink in the *Amellus* section, and one that must become popular. There is no question that from this may be obtained varieties brighter in colour and invaluable in every way. A good type of Aster to work from is Esme, a seedling of the Rev. Wolley Dod, 3ft high, with a large spreading head, pure white, and remarkable for lasting a very long time in bloom. One can imagine what a double white of this description would be worth, and it is coming. We have already semi-doubles, and one fully two-thirds double, and I am looking forward to the coming season for many others of this character. A race of good double Asters will be a grand addition to our list of decorative plants and also for pots, and it is only a question of time to obtain them.

*Anemone japonica* is in very successful hands, and great improvements have taken place, and many more to follow. Queen Charlotte, Mont Rose, and *Rosea superba* are grand. I should like to see the Parsley-leaved variety taken in hand. The foliage is wonderfully effective, but the flowers very poor.

*Agrostemma flos-Jovis* is capable of great improvement. It is a good all-round plant for cutting or decoration, and there is no reason why we should not get a double. There used to be a large double variety of *A. coronaria* thirty years ago, which I believe is now lost.

The common white *Arabis* has made a great bid for popularity. The double form is splendid for cutting, lasting well into summer. We have several species with rose and pink flowers. Why cannot we get this colour into the double one?

*Asphodels* form a very characteristic group, and I think the

Asiatic and European species might be brought together with very good results.

*Aconitums* offer many opportunities for improvement. A good yellow *A. japonicum* or even a yellow *A. napellus* would be a great acquisition. Do you think it possible to obtain them? I say yes.

The capabilities of the *Aubrietia* have been fairly tested, and we have now a good range of colour, but there is no reason why they cannot be still improved both in size and colour.

The *Calystegia*, I believe, is capable of a great transformation, and I see no reason why flowers of immense size and of almost every shade of colour cannot be obtained in the perennial varieties. If the annual varieties would not produce these results, we might seek the assistance of its American ally, the *Ipomæa*.

*Campanulas*.—We all know their capabilities, and there is not a single species in the whole race that cannot be improved. As a rule the great bulk are raised from seed, no attempt being made either to discard the bad forms or to retain the good ones, and many are becoming so poor as to be not worth growing. A few good hybrids we have, Van Houtte, G. F. Wilson, and Hendersoni being still among the best. I should like to see this family taken up by two or three enthusiasts, as they are so easily done, requiring little attention and the results quickly seen.

*Cheiranthus alpinus*, the Alpine Wallflower, would well repay a little attention. Crimson, red and yellow varieties would be very effective, and I think can be obtained.

*Chrysanthemum maximum* has shown a remarkable development, and some of the flowers are really superb. For decoration or for cutting they are matchless, and still I believe can be much improved. Some of the more recent seedlings have shown distinct signs of doubling, and I shall not be surprised any day to hear of one being raised. I have just read that American seedlings are showing signs of colouring, but I am doubtful about it.

The Shasta Daisy, which has been sent to us from the other side of the Atlantic, is described as being a marvellous production, but whether the plates are overdrawn or not, I cannot see that it will bear any comparison with what we have already got. I like the name Shasta Daisy and shall certainly use it.

*Coreopsis lanceolata* I think would pay well for a little attention, seeing we have some perennial species with rose coloured flowers, which we could fall back upon, providing the annual ones could not be induced to assist us in obtaining different shades from those already in cultivation. A red or rose coloured variety of *Coreopsis lanceolata* would find many admirers; a great deal might be done in selection, as I do not consider the present one anything like so good as the one I knew twenty years ago.

*Echinacea purpurea* has degenerated considerably during the last twenty years, and many of the strains now offered are not worth growing, whilst the good ones are among the best of our autumn perennials. The colour is being improved upon each year, and reds and purples will soon take the place of the poor varieties so often seen.

The *Erigeron* contains some good material for further developments, and in *E. speciosus* we have a very useful plant for all purposes and a great favourite, as it lasts so long in bloom. Among the perennial species we have white, orange, and flesh, and among the annual varieties yellows. Transfer either of these shades to the *speciosus*, and the result would be very pleasing. I find the "*compositæ*" as a rule, especially after the first break, very easy to cross.

*Eremurus*, white, lemon, and apricot varieties of *robustus* are in existence, and many other shades of colour will, no doubt, follow, but a man wants to start very young if he wishes to see the result of his labour in hybridising this family.

The species of *Geraniums* are, as a rule, somewhat weedy, but there are some among them remarkably showy, and could very easily be improved upon. The white variety of *G. sanguineum* is one of the very few varieties we have in this family.

The *Geums* are somewhat important, as they last a long time in bloom, are easily grown and very variable. There are now several good varieties of *Heldreichi*, *montanum*, and *coccineum plenum*, but these can be improved upon very considerably.

*Gypsophila paniculata*, the double variety which was shown before the Royal Horticultural Society during the past season, I think will become a very good plant, providing it can be propagated, but I have never been very successful in propagating this by cuttings, and I am somewhat afraid of the double.

In the *Heleniums* we have two or three good varieties, the best of all without a question is *H. pumilum magnificum*, and this, I consider, is one of the best twelve hardy perennials in cultivation. It is in flower well for at least four months, and during the drought of the past season was a mass of flower. *H. striatum* is a plant that will well repay a little attention, and I can see no reason why a crimson could not be obtained with care by selection. I have raised many, all striped more or less, but no self-coloured flowers.

*Helianthus* has been worked upon for some years past, and the new *Helianthus tomentosus* (certificated under the name of *mollis*) is excellent for crossing purposes. It is certainly the most

\* Improvements in Hardy Plants, a paper read by Mr. Amos Perry, of Winchmore Hill, London, N., before the Horticultural Club.

characteristic in the family, distinct in foliage and formation from any of the others, and one that does not run about.

*Heliopsis lævis* is still capable of further improvement. The colour is unique at that season of the year, and for cutting invaluable, but it is not a good habit. A variety 2ft or 3ft high covered with rich orange flowers would find many admirers.

The Oriental Christmas Roses are very useful, but I do not think can be much improved upon; they are no good for cutting, and never will be, but in a shrubby border they are very useful.

It is possible to get some fine varieties of *Hemerocallis*, but they will have to be remarkably distinct to find favour with the public. Commercially there is not much value in them, I suppose from the fact that they cannot be killed.

(To be concluded.)

## Gadding and Gathering.

"HERE AWA', THERE AWA'."

### Rochfords, Turnford Hall Nurseries.

Nowhere in England is there such an extensive market nursery as that of Messrs. Rochford and Sons, Limited, at Turnford Hall, near Broxbourne, in Hertfordshire. The station at Broxbourne is reached in forty minutes by rail from Liverpool Street Station by the Great Eastern Railway Company. And when one has stepped out at Broxbourne after having studied the mile upon mile of flat and low-lying country, much of it flooded in rainy weather, the visitor discovers that he has to walk back almost in line with the railway for a distance of over two miles in order to enter the Rochford's establishment. On a pleasant day the walk is exceedingly enjoyable, passing as it does by a deep canal with grass-shorn sides and onward to the highway leading past Turnford Hall. The canal referred to is kept under constant close supervision by men whose duty it is to repair and dress the sides. In mowing the grass upon the banks they evidently do not try to secure all of the mowings, judging from the large quantities seen floating down stream.

An impression of the extraordinary acreage and extensiveness of the business is obtained as one flies past in the train either going from or to London, and having spent two or three hours inspecting the glass ranges, one cannot find words more satisfactory in describing the place than to say that it is a wonderful concern.

Calling at the office, where half a dozen clerks, under a cashier, were busy on their books and correspondence, an office lad was procured as a guide to discover the manager, Mr. Kelsall, whom we found with the foreman.

When it is considered that nearly seventy English acres are practically covered with span-roofed glass houses it will be conceded that we did not attempt to inspect all there was to see. Here we saw a block of houses, each 200ft to 300ft long, and 12ft wide, devoted to Tomatoes; further on a similar set—perhaps half a dozen side by side—would contain the brighter flowering Zonal Pelargoniums for the supply of cut flowers; and so on. The houses run in various directions, and each great section of houses is divided from an opposite section by broad roadways for waggon and other traffic. In order to have a thoroughly efficient heating system stock-holes and boilers are built in line at short intervals apart. Each boiler heats perhaps a dozen houses. Dotted over a great area I counted two score of chimney stacks, built square with bricks, and each about 20ft high. The houses, as I have stated, are span-roofed, and joined on either side by a flat gutter 1ft broad. The top ventilators are worked by a lever from one of the outside ends.

The Tomatoes are grown in 8in pots, and succeeding them were the Zonals, one of the best among which was Raspail Improved. Begonia Gloire de Lorraine had gone past for the year, but its handsome white sport named Turnford Hall, and raised here, was still on view, and I was shown a seed pod on one of the plants. On the opposite section were some of the magnificent vineries, 30ft wide and 300ft long. The pipes are placed a little on either side from the centre, and run at half a foot above the borders. Gros Colman is a market favourite, and filled the houses I refer to. Only young healthy rods are cultivated, and a fresh stock is constantly maintained.

It would be without purpose were I to name all the classes of plants grown, but those cultivated by the thousand and in all sizes including Pandanus (almost milk-white in foliage, secured, it was said, by allowing plenty of light to them and confining the plants so far as practicable in small pots), Kentias, Rhaps, Latanias, Pteris, Adiantums, Asparagus plumosus nanus, and many other Ferns and Palms. Some of the most magnificent Palms were 12ft to 14ft high and in stout tubs. These were priced at thirty guineas apiece.

Other collections embraced *Fittonia argyrea* and *F. gigantea*, whose foliage is used in decorations; also *Cycas revoluta* to supply leaves for wreaths and other floral designs. The demand, however, for *Cycas* leaves has declined somewhat within recent years. I was gratified not less than surprised to learn that the

firm despatch large consignments of Palms to the United States of America, as well as all over the United Kingdom. The merchants in our own islands naturally deal largely with the Rochford firm.

A private service railway is conducted to the side of the nursery, and joins the Great Eastern Railway Company's main line at Broxbourne. There is thus the greatest facility for quick transit.

And since the firm has established a great refrigerator at Turnford Hall, it is enabled to store and supply millions of Lily of the Valley roots, or Liliums, Azaleas, or other subjects at any season of the year. These cold chambers were a source of great interest to me, for while the sun was warm and bright outside the building, every box and board within it was studded with hoar frost and icicles. Being arranged tier upon tier, one over the other, in huge piles, and so fitted that air passes between each, an enormous quantity of stock can be housed. The entrance doors are ponderously constructed and very tight fitting, while the walls, too, are thick and non-conductive to heat. Darkness reigns, and a lamp is necessary when an inspection is made.

At the time of my visit a second boiler for the refrigerator-engine was being added in case any untoward circumstance should disable the original one—a compact marine boiler. The air-compressing engine is 15ft from the boilers.

Reverting to the ranges, the corridor of *Lapageria alba* with spotless waxy flowers depending from the roof, was of wonderful beauty, and opening off on either side were the Orchid houses. It is well known that few collections of *Odontoglossum crispum* equal that of Turnford Hall. From so many thousands there are sure to be some of superior excellence and of distinctive characters. Such is, indeed, the case, and I was privileged to inspect some very prettily-marked and coloured crisps of splendid form and constitution. The houses of *Cattleyas* in varieties and *Cymbidiums* were each of interest and in the pink of condition; but time was too limited to stay—we had to "Move along," as the policemen say. By the way, it is noteworthy that *Lapageria rosea* is not grown, or, if so, it was certainly not conspicuous.

*Hydrangea Hortensia*, with such immense and beautiful heads of deep rose-pink flowers as I have never before seen, came as a revelation of what can be done by good culture. Yet the plants were only in 5in and 6in pots. *Kalanchoe flammea* in another house promised well, and only a day or two ago I was pleased to see this newcomer already in a London West End shop. A specimen plant of *Stephanotis floribunda*, covering fully 180ft in length of wire, in one of the ferneries, was roped with lovely clusters, and well earns its position at Broxbourne. The houses of *Eucharis* gave evidence of the care bestowed. And then, the Roses cultivated on the planted-out system under glass, add another feature, and one which it is hoped will be developed.

Some three hundred men are employed here, and a comfortable institute for the young unmarried men has been provided since 1896. Their meals are provided in the institute, and beyond the privilege of good, well-cooked food at a moderate charge, close to their work, recreation-rooms, and library with books and papers (the gardening journals, of necessity, included) are also attached. And this great business, now a limited liability company, was founded and built up entirely by the efforts of the late Mr. Thomas Rochford, whose lamented and untimely decease at the age of fifty-two occurred in October last.

### Floral Designs.

Although these notes on floral designs as viewed in one or other of the London west-end shops are recognised as being too extravagant to be patterned after literally, yet on a smaller and humbler scale the same general features may be copied, and with this hope I may be allowed to continue the notes from page 12. The best efforts of our London florists are seen during the earlier and middle days of each week. A magnificent wreath, composed of the flowers and trusses of a purplish-mauve variety of Fancy Pelargonium was worthy of special attention. Unfortunately I was unacquainted with the name of the variety whose colours were so pleasing and rich. The framework of the wreath was ensnathed in blooms closely and evenly laid on, there being no Ferns or other greenery employed round the circle. The wreath was suspended, and from the top side, facing the public, a loose arrangement which could not be described as a bouquet, yet which centralised much in the same manner, was fixed, and composed of individual blooms of the Pelargonium wired. At four points beneath this so-called bouquet were streamers fashioned so as to lightly veil the general circle, and, to add to the character of gracefulness, deep in the bouquet part of the wreath I noticed the well-selected leaves of *Caladium argyrites*, each disposed to the best advantage, and not one more than was necessary. On the lower outside fringe of the arrangement two other *Caladium* leaves were used; but these were at least 5in long and proportionately broad, and coloured creamy-white. Flowers of *Cattleya Schröderiana* and sprays of *Odontoglossum crispum* with a little *Asparagus plumosus* completed this excellent floral wreath.



Another object of merit worthy of notice, but which may be beyond the aims of most of my friends to reproduce, was a large floral cushion with concave sides and the corners attenuated to a point. From the sides to the centre the surface swelled evenly, the design being worked with rich rosy-cerise Pelargoniums. Around the edge on all sides were the flowers of Saxifraga sarmentosa, and at that corner which caught most of the view a greater profusion of the Saxifraga was carried forward, and shoots of the Alder, with its dark green leaves, lay beneath the white sprays of this flower. A bouquet arrangement consisting of blush Malmaisons for the underwork and much deeper coloured border Carnation flowers above, was poised about the centre of the cushion, being equally balanced on all sides. A few of the Alder leaves, with their corrugated surface and serrated edges, were used among the Carnations. At the upper left-hand corner from the one I have said was most prominent a large rose-coloured ribbon bow was fixed.—WANDERING WILLIE.

## Practical Entomology at Aldersey.

Tuesday, July 2, was prize-giving day at the Aldersey Grammar School, Bunbury, and the various reports went to show that the reputation of the school for general efficiency has been well maintained during the year. In certain respects the school stands out among the educational institutions of the country, while its remarkable attendance record, and the fact that the boys are so successfully encouraged to study practical entomology and other subjects pertaining to agriculture and Nature, have won for the school a unique and enviable position in the country. It is, moreover, a school with a history, for it was founded by Thomas Aldersey, a citizen and haberdasher of London. An interest has ever been taken in the institution by the Worshipful Company of Haberdashers, the governing body, and that interest was never more generously manifested than it was last week. Mr. O. S. Tudor, who presided, said that the school had lost a valued friend in the death of Miss Ormerod, who for twenty years took a practical and lively interest in the school. She considered the school ahead of all others in the science of entomology, in which she herself was an expert. Mr. Arthur Peell, a member of the Court of the Haberdashers' Company, had promised to give the prizes formerly given by Miss Ormerod.

### A Beneficial Crusade.

The headmaster (Mr. W. Bailey) read an interesting paper relative to the prizes for practical entomology. He alluded at the outset to the passing away of Miss Ormerod, who took an interest in the school for more than twenty years, and whose name he said, would long be a household word in Bunbury. He also made grateful reference to the fact that Mr. Field, a member of the Court of Assistants of the Haberdashers' Company, had voluntarily undertaken to provide the prizes hitherto given by the late Miss Ormerod. (Applause.) He said: "The attention of the boys throughout the school continues, by the desire of the Haberdashers' Company, to those insects which are injurious to cattle, food crops, fruits and forest trees, and to the best methods of prevention and remedy of their attacks. The boys continue their efforts to exterminate the ox warble maggots, which pests give so much needless pain to our fine herds of cattle, and are the cause of such a serious loss to our farmers—estimated by practical men at sums from two million to sevenmillion pounds sterling per annum. During the present half-year the boys have squeezed out 1,066 of these pests. These have been brought to the school on Monday mornings, and counted in the presence of Mr. Bailey or one of the assistant masters. The parish of Bunbury is comparatively free from this pest, but on visiting the outlying districts, on their bicycles, the boys have no difficulty in finding too many of these tormentors of the poor cattle. As to other injurious insects, the boys have brought to the school in the present half-year 16,284. Next month a nature study exhibition will be held in the Royal Botanic Garden, Regent's Park, London, at which not only the United Kingdom, but also the Colonies and the United States will be represented. At the request of the treasurer and secretary (Mr. C. S. Roundell and Mr. J. C. Medd), an exhibit will be sent up from our school, consisting of maps of school district, plans of school and playground, insect cases, breeding cages, diagrams, collections of insects, grasses, weeds and wild flowers, &c."

### Nature Study.

Mr. G. F. Dutton (assistant master) read a paper showing that the subject of nature study now takes a prominent part in the school curriculum. Besides collecting insects, the boys were continually bringing to school some new wild flower or leaf or plant which they had discovered, and of which they were anxious to know the name. Forty-eight boys had competed for Past Master Slater's prizes. They had collected wild flowers and weeds, and dried and mounted them in book form, giving the common name to each specimen. Mr. Dutton also read an equally interesting report on the collection of grasses by the boys, and a further statement on the map drawing.



### The President of the National Rose Society.

In the issue of July 2, the London "Daily Chronicle" contained the following notes which are full of interest to members of the National Rose Society, and to all the friends of the Very Reverend Dean who is so much respected as president, that we quote them in full:—"Dean Hole opens to-day at noon in the Temple Gardens the great Court of the year to her Majesty Queen Rose, the organisation being undertaken by the National Rose Society. The post of president is his by right of having been the first to throw down the gauntlet in honour of the Queen of Flowers. The Dahlia and the Carnation, and even "the vulgar hairy Gooscherry" each displayed themselves at exhibitions. He suggested in 1857 in the pages of the "Florist" that a grand national Rose show should be held. So exuberant was the Dean, then squarson—squire and parson, too—of Caunton, near Newark—at the result of his appeal, that bloodshed was the result—he "whistled in the act of shaving!" Rose lovers subscribed £200, St. James's Hall was engaged for July 1, 1858. Half the nurseries of England sent their treasures; the Rev. S. Reynolds Hole bringing his at daybreak a journey of 120 miles. So successful was the day that each following year has brought its Rose show, and the original 2,000 visitors have grown to tens of thousands.

"Born in 1819, this cheery knight of Queen Rose was educated at Brazenose, Oxford; and a brazen-nose, therefore, affectionately decorates the door of his deanery study. In due time he became curate of Caunton. Lord Salisbury in 1887 appointed him to the Deanery of Rochester, where, in contrast to his predecessor, Dean Liddell, the collaborator in compiling a Greek dictionary, he has devoted himself to other sorts of roots. From the wonderful album which he cherishes with proper care may be seen the portraits and autographs of all his distinguished contemporaries, whom he counted as friends—artists, literary folk, politicians, actors, ecclesiastics, from Dickens to Kipling, a member of the Rose Society, and from John Leech to Sir Frank Burnand. Here you learn that Dean Hole and Thackeray stood back to back, and in the matter of height were declared "a dead heat." Within the deanery, too, may be seen some of Leech's choicest drawings, which illustrated their joint 'Little Tour in Ireland.'"

### The London Rose Shows.

What was the purpose of the recent Conference on Roses held at Holland House? Presumably one of the desires of the promoters was to take note of the progress achieved in crossing and hybridising species and varieties. But even had the season not been dead against success, no effort seemed to have been made to exhibit species as a group by themselves, nor to arrange the newer productions in nearness to each other. When sections and characters are being so quickly broken down by the constant and laudable work of the hybridisers, we do require once and awhile to get back to the starting line, back to the species, for it is only by a study and knowledge of them that recruits to rosarian ranks can hope to understand the composition and development of the beautiful Roses they so patiently cultivate and passionately admire. Not a plant came from the Royal Gardens, Kew, and but for the groups from Paul and Son, and Charles Turner, the exhibition, in line with the Conference, would have been reduced to the blanky lines of show-boxes containing poor blooms, and better work than this is expected from the Royal Horticultural Society.

Two numbers back, in noticing the publication of an essay on "Clouds and Weather Signs," it was remarked that gardeners must be vigilant observers of "the floor of heaven," that they may work their way to success. How necessary it is to be ever watchful, and sometimes daring too, as a rosarian, was revealed on the Monday afternoon before the Temple Rose Show. The sky on that day became black and ominous everywhere, and while exhibitors would gladly have left their blooms until the close of the day, some of them felt that it was courting disaster to chance the storm which appeared imminent. "Make sure," became the words, and it happened that in two cases the last bloom was cut just as the first large raindrops came swiftly down.

The show itself was good to see, and a friend remarked that he could excuse the ecstasy of any Rose lover, and could also understand something of the charm that the cultivation and exhibiting of Roses has upon devotees, after his having gloats over those long lines of beautiful flowers in the leading open classes. But what can we say of the titled lady who replied with scorn, "I hate Roses!" to a gentleman who asked why she had not visited the Rose Show? I can vouch for the truth of the

story, but I cannot satisfactorily explain her perverted judgment and taste.

The coolness of the show day so admirably supported the flowers that Mr. Pemberton, who tried so hard at the last annual general meeting of the society to induce the members to endorse a two days' exhibition, must have felt that his case was now worthy of better consideration, and if he chooses to present a renewed petition he may have many new supporters. This year the two days' Rose show would have been an unqualified success in every direction.

May we expect an imitation "Rose-dell" or great assortment of decorative Roses in the open air another season? Who can describe the charm of a well-arranged open-air collection?—J. H. D.

#### The Philadelphia Rambler Rose.

A new Crimson Rambler Rose (says "Meehans' Monthly") has been sent out under the name of Philadelphia. It is almost identical with its parent, but the flower is slightly improved by being more double. The foliage is claimed to be better and less subject to mildew, but this is something that should be put to stronger test before the assertion has weight. Introduced by the Dingee and Conard Co., West Grove, Pa.

#### A White Hybrid Perpetual.

The introduction by Messrs. B. R. Cant and Sons of a strong growing Hybrid Perpetual white Rose marks a decided advance. The flowers of the new variety, which is named Frau Karl Druschki, were staged before the Floral Committee on July 8, and an Award of Merit was bestowed. On stout shoots, the flowers are of Al shape and build, the broad, smooth petals having great substance, and they are as white as those of Innocente Piola. It is one of the best additions of late years, and is sure to make its way into every collection.

#### Notes on Early Flowering Roses.

Varieties of Roses that naturally flower early in the season, no-matter what section they belong to, are always appreciated; there seems to be such a charm about any Rose that opens its blossoms in advance of others. This is not the season really to test varieties for that purpose in their true character, the weather is, and has been, so unseasonable—indeed, it is surprising to me to see how well the plants promise, even if somewhat late, in their various stages of growth and development of flower buds. When speaking of early flowering Roses one should be careful to remember where the plants are growing, as all the difference imaginable exists in the same variety growing at the foot of a south wall as compared with the same sort growing in the open.

Quite one of the earliest Roses to open its blossoms is the old pink China when growing at the foot of a south wall. Either in bud or when fully blown this is quite one of the most charming of Roses. It is difficult to say how many years a plant will flourish in the same site with no attention being paid to it either in pruning or stimulating with manure. A plant of this variety close to where I write has flowered profusely to my knowledge for over twenty years with but a minimum of attention.

Against a wall Gloire de Dijon is still one of the earliest to give its welcome blossoms. A system of pruning to encourage vigorous base shoots is the way to get the best returns from this old favourite. From such growth there exists all the difference imaginable in the size and quality of the flowers.

Reine Marie Henriette is another early flowering Rose. The half-opened buds display this Rose at its best. Madame de Watteville, Princess of Wales, and Niphetos are a trio of Tea-scented varieties that early display their charms against a wall.

In the open we get a truer test of early flowering sorts. Quite a favourite is Carmine Pillar; its richly coloured single-flowered blossoms are always appreciated, and coming before almost any other of its section it is doubly prized. For cutting it is a gem; the blooms and buds are gorgeous by themselves, in a mass, or for associating with other flowers they are desirable. A mass of this Rose in a bowl along with Saxifraga hypnoides produces a telling effect.

Aglaia or Yellow Rambler, when its culture is properly understood, is one of the most charming of climbing Roses. It is a rampant grower, and requires age or management to induce it to flower freely. If pruned hard back it makes vigorous shoots, which fail to blossom at all that season, but if such growths are allowed to remain, provided they are not too thick, the plant will be smothered with its pale yellow blossoms in clusters of from six to ten on a spray. For covering an arch, pergola, or a pole no Rose is better adapted for the purpose.

Madame Georges Bruant is of the purest white, semi-double, producing its blossoms in bunches of from six to ten. It is strictly a bush, and flowers fully twice yearly. Pulverulenta is a pure white single-flowering variety, opening its blossoms earlier than any other. Celine Forestier against a wall is a pleasing Rose to grow. The soft yellow blooms are produced in clusters quite freely.—E. MOLYNEUX.

## Some Typical Gardens.

### IV.—A Place of Many Loves.

As the headline explains, my typical garden this week is not that of a one-plant specialist, but of a large-souled individual, who has room in his affections for many favourites, in all of which he takes an unfeigned interest. Let me say, however, that I have every respect for the one-plant man. By the concentration of his energies on this flower or that, marvellous improvements have taken place, but, in order to appreciate him fully, you must be imbued with similar tastes, and have special affection for the same plant or flower. Of course, this is an age of specialities, and the interests of popular flowers are furthered by societies formed by those enthusiasts who make particular hobbies of this flower or that. This is quite as it should be I have no doubt, but I must confess to having a weakness for the garden of many loves, that is tended by an individual who can disperse his affections equally, and be accepted as an authority on every plant he grows.

I enjoy the privilege of knowing such a man, and at all seasons his garden is a place for interest and enjoyment. I envy the owner, not only of his possession of it, but also of the ingenuity he displays in finding room for his many favourites in places suitable for their requirements. Do not think that the garden in question is a jumbled-up mixture of a hundred things, growing anyhow, one with another, without any display of order and arrangement. Not a bit of it; and this is just where the garden is unique. To describe it briefly, it seems as though little bits of the gardens of half a dozen specialists had been placed together and made into one, while the owner appears to possess the tastes of the above number of what we call one-plant men.

What is so much to our friend's credit is that the garden is of his own making. He tells his visitors that he was always a lover of flowers, and even in business days, when he lived in a town suburb, his little back garden was the envy and delight of his neighbours. When he left the old associations and took up his abode in the country, his acquaintances told him that he would tire of its quietness and monotony; but they did not know their man. He had already learnt something of the delights of floriculture, and when he found himself with time and facilities for pursuing his hobby, the knowledge he had gathered came to his aid. In its general aspects the garden differs little from hundreds of others. It is an ordinary enclosure encircling a country house, private as all true English gardens are, and sheltered by belts of shrubs. It is not a show place. No flower from it has ever won a prize in competition, simply because the owner does not exhibit, though his friends tell him he ought to do; but any person, be he stranger or otherwise, so long as he is a garden lover, is welcome to go in and see what there is to be seen. Our friend does most of the work himself, and the rest is performed, under his directions, by the odd man, who, I understand, is distinctly odd, by the way he has of mixing up labels and causing trouble in other directions, if not closely looked after. He does not share his master's love for flowers, nor yet his regard for order; but he is quite content to take second place, and so the two agree fairly well.

Early April is a pleasant time in the garden of many loves, and one of them stands out conspicuously at this season. It is the Daffodils, for which our friend has a fond regard. They meet you when you enter through the garden door, swaying in the breeze, and nodding a welcome as you pass by. They are grown on the orthodox system in oblong beds, with a large label at the end of each row, on which the name of the variety is plainly written. Here you gather the idea of the specialist, and as our friend turns up first one flower and then another, and discusses its points, you feel that it is no novice who is speaking. All sections are represented from the tiny Angel's Tears to the giant Empress, each one in its own place, and marked by its own label. The florist who lives for Daffodils alone would be happy here, though it is only a corner of the garden. "I grow my bulbs here," says our friend, "they grow themselves elsewhere." And there is evidence of it, for you see them in the grass under the trees, and dotted about in the shrubbery borders.

So much for one love, but there is another to hand on the beds in front of the house. When the Daffodils go out the Polyanthuses come in, and here again our friend displays his floral tastes. Polyanthuses in the ordinary way of culture are commonplace enough, but in this garden they have been made a study. The strain is superb, because poor forms are weeded out and the best only remain. Before the flowering is over every spring certain plants are selected, and the seeds carefully preserved. The latter are sown, and the next season's stock is raised. The method, you see, is not only that of a flower lover, but a thorough gardener, and if a collection of this old-fashioned flower is to be really interesting some defined line of treatment must be followed. "Everyone admires my Polyanthuses," says our friend, "and I have set lots of people up with seed; but, bless you! they do not trouble to select the plants afterwards, and the strain runs out."



Perhaps a birdseye view of this garden from a balloon would not be prepossessing, as it would look too much of a maze of beds and intersecting paths; but, as I have said before, our friend is a florist, and has laid out his garden to meet his requirements. The little Rose garden is a tiny place, but it stamps the owner of it as a rosarian. You enter it through a rustic arch, over which a Crimson Rambler climbs, and in June time it is a charming spot. The little beds, intersected by strips of turf, are cut in shapes to economise space, and in front of every plant dangles its zinc label, showing the name. This labelling of everything must be either done for the sake of order, or else for the benefit of visitors, for our friend never looks at one. There is no need for this, as he knows the flowers too well, and speaks of the beauty and habits of each one in a personal sense as though he were discussing an old friend.

"There is always a charm about a good Rose," he remarks, "wherever it is grown; but I was never so happy as when I got a fine flower from a shy variety in my garden near town, because then I felt that I had really achieved something. Here they grow themselves." There is a good deal of the Mark Tapley temperament about a florist in the satisfaction he feels when he accomplishes something under difficulties, and our friend displays it in his remark about the Roses. He has no special sections, for he loves them all. The H.P.'s have their own place, likewise the Teas. The climbers revel on the garden wall, William Allan Richardson rambles over the verandah, Maréchal Niel grows in the conservatory because its constitution is rather tender, and recently a rough corner was cleared for the latest addition in the shape of a collection of Penzance Briars.

But I must dwell no longer on the Roses, for there is a bed close by that merits some attention. Here the Carnations grow, and these flowers are amongst our friend's many loves. The collection is small, but it is up to date, and there is nothing slipshod about the cultivation. Glance at the labels, and you will see names of varieties that have been awarded honours, but our friend is not altogether satisfied with some of the modern introductions.

"Very beautiful," he says; "colour and form perfect, but very little scent, and a Carnation without it is wanting in its greatest charm." I quite agree with him. Layering season is a busy time in the garden of many loves, for the plants are mostly propagated in this way, wintered in pots in frames, and planted out the following spring for blooming.

"Like the rest of them," remarks our friend, "I have got a touch of the Sweet Pea craze, and until I grew them I had no idea how interesting they were." Then, if the season happens to be summer, he leads the way to the quarter where his latest favourites grow. Two or three dozen of the cream of the many varieties, each in its own little clump, and grown in this way because, as our friend says, he has not room for a great many of one sort. There is something of a mixture here, too, for between the clumps of Sweet Peas the Cactus Dahlias grow, and these have their own accorded place in the garden of many loves. Its owner frankly admits that he was no Dahlia man in the palmy days of the old show varieties, but when the beautiful Cactus section appeared he fell an easy prey, and year after year, as the new forms have been introduced, his collection has increased. He loves them, he says, because they are amongst the last of the outdoor flowers, and bloom on till frost puts the veto on garden products.

Of course, there is an herbaceous border, because our friend has a warm corner in his affections for hardy plants. It runs right through the garden, on either side of the centre path, and the great mystery is how he has managed to get so many plants in it. There is the same love for order, too, for you see no vigorous plant smothering its weaker neighbour. The neat labels give you the names (our friend knows them), and from year's end to year's end, with very few breaks, there is always something in flower. In a partially shaded corner at the end of the herbaceous border, a quantity of rough stones and boulders have been piled together, not with the idea of forming an artistic rockery, but to provide a habitat for the interesting little Alpines that ramble over the stones or nestle in the crevices.

"I like these little plants," says our friend, "because they won't be cultivated and improved upon. Give them what they ask for, and they will grow without any shifting and changing; but you must not try to make them do just what you want. They are not made that way." Follow the rockery to its termination. It ends in a low part of the garden, where a stream of water trickles through a hole in the wall. I think our friend is responsible for it coming this way, and the damming up of the water to form a little pool was done with a purpose. A few Water Lilies grace the surface, bog plants grow round the sides, and this little attempt at an aquatic garden must obviously be counted amongst the loves.

Our friend says he has never attempted much glass house gardening, except in the conservatory, which is a builder's legacy, and the frames he needs for propagation. The reason he gives is because he has too many loves outdoors to entertain any more. I asked him once if giant Chrysanthemum blooms did not attract him, but he answered in the negative, though he grows a few bush plants for the conservatory.

I have not enumerated all our friend's loves, but I can only mention one other—his books. He boasts that he is a book-learning gardener, and from his library he has obtained many of the methods that he puts into practice. When flowers are over his book love remains, to provide him with company and amusement on dull winter days. The volumes are mostly about flowers and gardens, and our friend has as much regard for the ancient authors as the modern ones, while his respect for the old florists is unbounded.

There you have my type of both gardener and garden. Neither of them are what you would call common, for few men possess the capacity for sharing their affections amongst so many favourites without one or more getting the preference. One-love gardeners are common enough, and horticulture has every reason to be proud of them; but I question if anyone could extract more real pleasure out of the craft than the owner of the garden of many loves.—A BRITISH RUSTIC.

## Edinburgh Notes.

Until now, the beginning of July, the effect of the continued coldness of the weather has been the absorbing topic of the horticulturist. Since the beginning of June we have scarcely experienced two consecutive days of summer weather, and from lack of sunshine, and cold east winds, less hardy vegetation has had a trying time of it. Many of the ornamental foliaged trees and shrubs have had their leaves so blasted and torn as to be quite out of character.

Early planted out bedding stuff, and more especially those which had not been thoroughly hardened off before setting out, has suffered considerably, and unless congenial weather ensues, will be long before it produces the desired effect.

The fruit crop has also been damaged, and is several weeks late.

Apples, Pears, and Plums which blossomed profusely have now turned out rather poor, and the crop will in most cases be a thin one. Strawberries, Gooseberries, Raspberries, and Currants are a fair good crop and so far free from insect pests.

Brassicas, and vegetables in general, are looking well, and promise to give a full return. That this latter crop is a full one is gratifying, especially to the market grower, who, owing to the drought last year, had a poor return. The first consignment of local grown Peas were offered for sale in the Waverley Market this week, being three weeks later than last season.

Apropos your excerpt from the "Florists' Exchange," on page 555, of your issue of the 26th ult., although I cannot herald the inauguration of a society such as there described, we have at any rate in our city gardener a genius who can be safely entrusted to keep our public gardens up to date in matters horticultural. The summer bedding in Princes Street Gardens is one of the sights of the city, and with a view to Coronation season designs have been made accordingly. In a future issue I trust to be able to give a more detailed description of this excellent work of Mr. McHattie's.

The Coronation fête and floral gala, held in Murrayfield Park, in some measure atoned for disappointment caused by the postponement of other entertainments. Owing to the backward season the floral entries were not what might be expected, but the other competitions were well contested. There was a large attendance of the public during the whole week, and the venture reflects credit on the enterprise of Mr. Hutchison. Were our two horticultural societies to hold a joint floral fête, with entertainments, every July, there can be no doubt but it would be a remunerative speculation as well as an interesting one for the general public. [To the last sentence we would add the words: Undoubtedly so.—ED.]—SCOTIA.

## Two Dahlia Manufactories.

This title fittingly describes the Dahlia industry, which can be observed in the months of February, March, and April, in the nurseries of Messrs. Dobbie and Co., nurserymen, of Rothesay, Bute, and Hobbies—i.e., Pastimes—Limited (John Green, Norfolk Nurseries, Dereham, Norfolk). One must go some distance from the centre of London to reach either of these establishments, and having reached them, it is possible to see where softwooded plants are turned out by the hundred thousand; and the visitor wonders, not so much where the plants come from, as it is possible to see the machinery of the production of the plant material in operation, but where they go.

### Dobbies of Rothesay.

I took advantage of the opportunity of being in Edinburgh to go on to Rothesay to see the Dahlia industry in full swing. It is a peculiarity of the Rothesay business that they sell an enormous number of cuttings of Dahlias, and in order to have

an early supply, preparations for propagating on a large scale have to be commenced before Christmas. A spacious oblong span-roofed house, some 60ft long by 16ft or so broad, with a brick-lined bed down the middle and a similar one of lesser width at the sides, is planted with Dahlia roots—ground roots, lifted from the open ground some two months previously; and in addition a number of pot roots—i.e., the unsold green plants of the previous summer. Mr. Cuthbertson said there were 10,000 roots in this house, planted as thickly as possible in the beds, and half covered with soil, leaving the crown of the root exposed to view, this being the point from which the young shoots are put forth. Hot water pipes pass through the beds, but they are not visible. At the time of my visit, the third week in March, the cutting trade was in full swing, though there had been no relaxation of the rooting of cuttings for the production of green plants for May orders. How busy the propagators had been was shown by the fact that in one large house there were some 50,000 cuttings placed round the sides of small pots, plunged in cocoa-nut fibre with a bottom heat of about 80deg.

But this was not all. Outside were lines of frames, heated,

cutting on the ledge of the bed; another ties the cuttings up into little bundles, the bundles are collected, sent into the packing shed, the order is checked, and then despatched. The packing rooms are admirable. They are an enormous improvement upon the packing sheds of fifty and less years ago. Messrs. Dobbie and Co. plant out over three acres of Dahlias, including seedlings, and a large number of green plants have to be held over to furnish pot roots for foreign and colonial orders in winter. During the month of May, and on into June, there is an increasing trade done in green rooted plants, which find their way to all parts of the kingdom.

#### Dereham Nurseries.

A month later I was inspecting the Dahlia manufactory at Dereham, Norfolk, as above (Hobbies, Limited), the horticultural managing director of which is Mr. John Green. Here Dahlia propagation is carried on to all appearance as extensively as at Rothesay. It was getting towards the end of the propagating season, but it was by no means over. Mr. Green, who is a well known raiser and exhibitor of Dahlias, having produced some



Holland Park Show—F. Cant's Roses. (See page 34.)

full of pots of cuttings already rooted, but undergoing a process of hardening previous to being potted off singly into small pots. They are taken into the potting shed from 2,000 to 5,000 cuttings at a time, potted off, returned to the warm house and kept close for a time, then hardened off in the frames in the open ready for the execution of orders.

The houses in which the cuttings are rooted have an inside shading to the roofs of green blinds, which can be drawn down over the interior at night so as to maintain the day temperature as equably as possible. Above the blinds are ventilators, always kept open, more or less, night and day, and over the openings in the ventilators is a covering of fine muslin, which, while not excluding air, yet prevents the downward rush of cold currents.

The sale of cuttings begins in February, and goes on until April. The main of the cuttings are despatched by post, packed in boxes with damp moss. As cuttings can be sold so much cheaper than plants, it is not to be wondered at that there is such a demand for them. The trade take great quantities, and the amateur class are eager buyers. It is interesting to watch the process of executing orders. A huge case of printed names is at hand: the collector of the order calls the name of the cutting he takes off, it is handed to him, and he lays it by the side of the

very fine varieties of the Cactus type, does no trade in cuttings, but the demand for plants is very great. Two or three large houses are devoted to the propagation of Dahlias, but of these the Cactus type very largely preponderates.

At Dereham seedling Dahlias are raised in very large quantities; they are to be seen by the thousand, and as we were looking over the pans of Cactus varieties, Mr. Green pointed out some with quite pale main and leaf stems, and he said these are pretty certain to produce white flowers, and, he added, there is plenty of room for a good white. As these seedlings are all from the best blood, it is reasonable to suppose some very fine novelties may appear among them.

It will be remembered that at the exhibition of the London Dahlia Union, held at the Royal Aquarium, Westminster, in September last, Mr. Green had on his stand blooms of a new type of single Dahlia known as President Vigier, or the Collarette type—"a single Dahlia with a collar." This is being largely grown at Dereham, it being held that so much curiosity was excited over the type that it is pretty certain to be in considerable demand. Enough to state that the Dahlia is very widely recognised here, and every type is to be found in stock; among them some highly promising new Cactus varieties.—R. DEAN.



## NOTES

## NOTICES

**National Dahlia Society.**

A meeting of the Committee of the above Society will be held, by kind permission of the Horticultural Club, in the Club Room, at the Hotel Windsor, Victoria Street, S.W., on Tuesday, July 22, at 4 p.m. Business: Election of Judges. Advertising exhibition. Other business.—J. F. HUDSON, Hon. Secretary.

**York Gala.**

Mr. J. C. McPherson (who does not comply with our request not to write privately to correspondents, but instead, to address the Editor) writes from Londesborough Park, Market Weighton, Yorks, as follows: "An error was made in your paper of June 19 in the report of the York Gala and Horticultural Show. In the fruit classes for a collection of six dishes I was awarded first; not Mr. Goodacre." Our representative at the show complained of the limited time at his disposal for gathering up the awards, and reporting in a crowd is no joke.

**Cardiff Flower Show.**

We are requested by the secretary of the Cardiff and County Horticultural Society (Mr. H. Gillett, 66, Woodville Road, Cardiff) to draw attention to the Affiliated Societies' Competition for a challenge trophy (silver bowl), value £26 5s., together with three guineas in cash, "for the best collection of cut flowers, grown in the open, occupying a space 12ft by 3ft. The second and third prizes are two guineas and one guinea respectively. Bracketed to receive the same awards as prizes is another class for "the best collection of vegetables, occupying a space of 6ft by 3ft."

**The Progress of Novelties.**

Every now and then some new plant or flower makes its entrance on the horticultural stage, and claims the applause of the boxes and the gallery alike. Everyone interested longs to have the new thing, and those who have the means can soon become possessed of it. Others have to wait awhile till the novelty stage has worn off a little before their turn comes. It does not seem long since the beautiful Begonia Gloire de Lorraine made its appearance, and created a sensation in floral circles, and now, practically speaking, it is a common plant, more widely grown and better known than hundreds of others that have been in cultivation ten times as long. Only recently I saw some well flowered specimens of this charming Begonia growing in the little greenhouse of a working amateur. A few years ago the plant would have seemed beyond his means; but Gloire de Lorraine captured public taste, and where there's a will there's a way.—H. C. W.

**A Promising Career Cut Short.**

It is with pain and regret that we record the death by drowning of a friend and late fellow student of ours when in Edinburgh, Mr. Archibald Dods Hogg, son of the late Mr. John Hogg, Dalkeith, who left Edinburgh on Monday last for St. Andrews, where he had been appointed to assist Professor M'Intosh in the Marine Observatory. After tea, on Tuesday, he left his lodgings for a walk, and did not return. Inquiries were set on foot next day, and meanwhile some mussel dredgers reported that while at work in the River Eden, opposite the farm of Rives, they had found a gentleman's grey jacket containing several letters in the pockets addressed "Mr. A. D. Hogg, Royal College of Science, South Kensington, London." It is believed that Mr. Hogg lost his life while bathing or in an endeavour to obtain zoological specimens. Mr. Hogg was twenty-five years of age. Educated at Dalkeith High School and George Watson's College, he worked for four years as a gardener in Dalkeith Palace Gardens, and also for some time in the Royal Botanic Gardens, Edinburgh. He took classes at the Heriot Watt College, and gained a National Scholarship, which he has since held at the Royal College of Science, South Kensington, where he was the best man of his year in zoology. On this account he was recommended as assistant to Professor M'Intosh.

**Strawberry Season in Hampshire.**

In spite of an unusually rainy June, Hampshire Strawberries are very plentiful and of excellent quality this year. There is at present a ceaseless procession of the specially constructed carts, conveying a multitude of baskets of Strawberries from the fields to the railway stations. The season's output is roughly estimated to be 6,000,000lb of fruit.

**Dundee Horticultural Association.**

"Carnations and their Value as Garden Flowers" was the subject under discussion at the monthly meeting of the Dundee Horticultural Association in the Technical Institute, on July 3, the subject being opened by Mr. James Kydd, Forthill Gardens, Broughty Ferry. An interesting competition took place for three vases of Roses, the awards being in the following order:—First, T. Butchart, Elmslea; second, A. C. Cameron, Bironck; third, T. C. Brown, Balcairn. Mr. James Reid, Dudhope House Gardens, exhibited a collection of Pyrethrum blooms; Mr. Nicoll, Farington Hall, a collection of cut herbaceous flowers; and Mr. Bethel, Newport, specimens of new Potatoes, Peas, and Cauliflower.

**Edinburgh Coronation Decorations.**

Although these in the main were done in an artificial manner and were on the whole very elaborate and tasteful, a few were arranged in natural flowers and evergreens, notably the Scottish Widows' Fund buildings, which was carried out by Laird and Sons, Limited, and was very prettily done in evergreen festoons and Palms of sorts, and the lower windows and balconies filled up Marguerites, Pelargoniums, and other plants, and attracted much attention. Another very pretty and attractive decoration was that carried out by Messrs. Leith Brothers on the British Linen Bank, in St. Andrew's Square. All of the many windows were filled in to represent the Union Jack, and were done with Pelargonium Raspail (red), Marguerites (white), and Lobelia (blue), and looked superb. Over the porch entrance was an immense crown 7ft in height and most tastefully done up.—W.

**Royal Trees.**

I observe that the King before leaving Rangemore commemorated his visit by planting a Cedar of Lebanon. May the Royal tree flourish and prosper. This custom of Royalty is a particularly happy one, and there are many sturdy specimens in different places that were planted by our late Sovereign, Queen Victoria. They are thought much of, and as the years roll on their fame will increase. It will be the same with the Royal tree at Rangemore if good fortune attends it. The Cedar of Lebanon is a noble tree when fully developed; but the present monarch will have been gathered to his fathers before the Rangemore specimen can reach its full proportions. The tree planted by King Edward the VII. is famous already; its fame will grow as time rolls on, but will reach its height years hence as a living memento of the Royal visit to the beautiful home of Lord Burton.—H.

**Irrigation Farming.**

From the title as above, the reader will conclude that the book to what it belongs is not of English make, but American. Our great need in the United Kingdom is drainage, not irrigation. True it is that the garden hose is required ever and anon, but a stream, or river, or spring is always at hand to generally feed as many pipes as the cultivator cares to lay on. In British agriculture, irrigation is seldom practised. The book we here notice is published by the Orange Judd Company, of New York, the author being Lucius M. Wilcox, editor of "The Field and Farm," and is suitably illustrated. We have endeavoured to give it a patient consideration, but not having seen the principles of irrigation such as are applied on an extensive scale in the arid tracts of many of the United States carried into practice, we found the book and its American technical phraseology not at all absorbing. That, however, must be set down to our own ignorance, for we believe Mr. Wilcox has written a useful book, and one that is "understandable" (to employ a word of his own), the diction being by no means "above the heads" of the class of readers it is intended for. We notice he classes the garden merely as a part of the farm, and garden culture out west is, from his statements, far below the British standard of gardening. (7 by 5. Pp. 494, with index.)

**Cornish Gooseberries.**

Gooseberries are being sent away from Cornwall in large quantities at the rate of ten guineas per ton, which is the highest price recorded for a decade.

**Death of M. Simon Delaux.**

We regret to learn of the death of this notable French horticulturist, who was particularly distinguished in the culture of Chrysanthemums, and to him is due a great number of the best French varieties. He died on the 8th ult., at Toulouse.

**Edinburgh Botanic Garden Staff.**

Following the retirement of the late head gardener, Mr. Richardson, in reference to which we furnish a separate paragraph, the work of cultivation has been divided into three sections, each with a foreman, thus:—Glass department, Mr. L. Stewart; herbaceous and Alpine, Mr. D. S. Fish; and garden trees and shrubs, Mr. W. Smith. Mr. Harrow succeeds Mr. Richardson as head gardener.

**June Weather at Temple House Gardens, Great Marlow.**

There was a heavy thunder and hail storm on the 7th and thunder again on the 16th. The maximum temperature for the month was 84deg on the 28th and the minimum 36deg on the 9th. The maximum temperature for June, 1901, was 81deg on the 9th and the minimum 36deg on the 18th. The rainfall for June, 1901, was 1.36.—GEORGE GROVES.

**Odours and Colours in Plants.**

What is probably true of odour in plants is equally probable (suggests the "Morning Post") as regards colour. Blossoms of flowers are, as a rule, avoided by animals. Therefore we find the leaves of plants often imitating the colours of flowers, as in the case of Geranium leaves, the leaves of the Begonia, and Indian Nettles. Resembling odours are not very common among the flowering class of plants; they are found more often in the fungi.

**Gordonia lasianthus.**

The question has been asked of me (says Joseph Meehan) whether *Gordonia lasianthus* is not the equal of the *G. pubescens*, and whether it is hardy at the North, to which I would answer, No, in both cases. This species has been under my care twice for trial. The plants on both occasions struggled along for two or three years, getting partly killed every winter, and, finally, dying outright. Probably at Washington, D.C., and vicinity it might prove hardy. The flowers are very pretty, but are smaller and less conspicuously beautiful than those of *G. pubescens*. As a tub plant it is very fine, and blooms freely every summer.

**Sussex Weather.**

The total rainfall at Abbot's Leigh, Haywards Heath, for the past month was 3.53in, being 1.52in above the average. The meanest fall was 0.56in on the 7th. Rain fell on sixteen days. Total for the six months, 11.34in, which is 0.83in below the average. The maximum temperature was 83deg on the 28th, the minimum 41deg on the 10th and 11th. Mean maximum 69deg, mean minimum 48.29deg; mean temperature 58.64deg, 1.52deg below the average for the month. A decided improvement in the weather took place after the 20th. The ten days' brilliant weather culminated in a heavy thunderstorm on the evening of the 30th, with some rain. Thunder has hung about to-day (the 1st), but the barometer is well up and is rising. A continuance of bright weather would be most welcome.—R. G.

**June Weather at Belvoir Castle, 1902.**

The prevailing direction of the wind was south; total, twelve days. The total rainfall was 2.05 inches, this fell on seventeen days, and is 0.07in below the average for the month; the greatest daily fall was 0.55in on the 12th. Barometer (corrected and reduced), highest reading 30.276in on the 24th and 25th at 9 a.m.; lowest, 29.420in on the 13th at 9 a.m. Thermometers:—Highest in the shade, 82deg on the 28th; lowest, 36deg on the 10th; mean of daily maxima, 64.60deg; mean of daily minima, 47.73deg; mean temperature of the month, 56.16deg; lowest on the grass, 32deg on the 10th; highest in the sun, 141deg on the 30th; mean temperature of the earth at 3ft 52.53deg. Total sunshine, 183hr 30min, which is 2hr 10min above the average for the month; there were four sunless days. The temperature has again been very much below the average.—W. H. DIVERS.

**Itea virginica.**

Now that the greater number of spring flowering shrubs are over, it is a pleasure to have in bloom *Itea virginica*. This native shrub is not in general collections, though very worthy of being. Besides being covered just now with its finger-like spikes of white flowers, in autumn it is one of the handsomest of foliage shrubs, its leaves changing to a most brilliant, intense red. It should be noted to be set out next autumn by those looking for shrubs having brilliant coloured leaves.

**Pancratium illyricum.**

A Roxburghshire correspondent recently sent a flower scape of this handsome Amaryllid, native of the South Mediterranean regions, for identification. With a lady friend of his, he says it grows out of doors on a vinery border, and blooms most profusely, setting large quantities of seeds every year. The seeds are hard and green, and in size as large as Broad Beans. The flowers are borne in scapes in clusters of from six to twelve. They are 6in long at least and pure white, the foliage being 1½in broad and some feet in length. It is a good border plant.

**Mr. Geo. Wythes and Alnwick Castle Gardens.**

Mr. G. Wythes is, we hear, giving up charge of Alnwick Castle Gardens. Of late Mr. Wythes' health has not been very good, and the charge of two such large gardens so far apart is not advised.

**Australian Cricketers at Highbury.**

On Tuesday, July 8, by the courtesy of Mr. Chamberlain, the Australian team of cricketers now touring in this country paid a visit to the gardens and plant houses at Highbury, with which they were much delighted.

**£3000 Worth of Flowers.**

This is the reported sum computed to have been spent on flowers for the decoration of the rooms and banqueting hall on the occasion of the reception of the Indian princes now in London, by the India Office, on Saturday, July 5.

**The late M. Marc Micheli.**

The death of this distinguished Geneva botanist recently is announced. He will be remembered as being one of the first to graft *Clianthus Dampieri* on to young plants of *Colutea*, by which means the beautiful "Glory Pea" has become far more common and easier to cultivate. He also introduced the newly certificated *Fritillaria askabadensis*, the flora of Western Asia being a particular study of his.

**Fish which Like Cherries.**

What is known among anglers as the "Cherry season" has opened on the Thames. Chub are very fond of this fruit, and the angler, placing a single cherry on the hook, allows it to float down the stream at spots likely to harbour chub. The fish dart cut from their haunts and seize the cherry, only to find that it is scarcely the kind of dessert they bargained for. As much as 70lbs of chub have been taken in the Thames with Cherries in one day's fishing. Chub are sometimes caught with Strawberries in the Thames.

**Mr. A. D. Richardson, Edinburgh.**

We take the following from our contemporary, the "North British Agriculturist": "Last month, Mr. A. D. Richardson retired from the post he had so long held at the Royal Botanic Garden, Edinburgh, in order to set up in business as a landscape gardener and consulting forester. Many of his former pupils and numerous friends throughout the country are desirous of expressing in some tangible form their appreciation of his services in the cause of horticulture, forestry, and botany; and especially of recognising the valuable help he has long given so ungrudgingly to young men less favourably situated than himself for acquiring a comprehensive and scientific knowledge of plant life. Messrs. D. F. Mackenzie, factor, Morton Hall, Liberton; Donald Robertson, Dunrobin, Golspie; D. Young, Editor, 'N.B. Agriculturist'; Alex. Pitcaithley, Jeannie Bank, Scone; George P. Berry, lecturer on horticulture, Cockle Park Farm, Northumberland; George Leven, Aucheneruive, Ayr; William Davidson, Margam, N. Wales; with J. F. Ammand, Haystoun, Peebles, as hon. secretary and treasurer, have agreed to act as a committee to carry through the necessary arrangements. A meeting of subscribers will be called at an early date to decide what form the presentation should take."



## Primula obconica as a Bedding Plant.

Though by some much decried, if not actually abolished since the discovery of poison in the leaves of this *Primula*, there are, nevertheless, some who are sufficiently fearless and unconcerned as to cultivate them for decorative purposes in pots, and it cannot be denied that they do possess a very great and accommodating merit as a decorative plant. The poisonous properties possessed in the leaves affect not every one alike. Some there are who feel no possible inconvenience, while others must, so to speak, keep them at arm's length. As a bedding plant I have not grown them, but since I have seen them applied to this purpose so effectively at Forde Abbey, a desire is raised to do so elsewhere. So many plants are nowadays applied to bedding purposes that the novelty of former days at the advent of some innovation in the character of bedding plants is now not so keenly acknowledged. That the hardy *P. obconica* is used in many flower garden arrangements may be taken for granted, yet, while this is true, there are many flower gardens yet without the acquaintance of these plants in summer and autumn. The floriferous nature of these *Primulas* needs no new praise, because they are so well known to everyone; it is, however, the knowledge of this fact that so readily admits them into a sphere hitherto unoccupied by them. To those who grow a quantity in pots for conservatory and house decoration, it need only that these be hardened off preparatory to their occupancy of beds or borders outdoors. Where they are not so freely grown, and a desire exists to apply them to this summer purpose, preparation need be made for doing so at some previous date. It is known to many that in spring sowing there is often much fickleness displayed in raising these *Primulas*, and more often than not a partial success only is obtained. To overcome this difficulty new seeds are recommended, which means autumn sowing instead of waiting until spring, or, rather, the early months of the year, to do so. This would be necessary for getting strong plants ready for summer bedding where none, or an insufficient stock, of pot plants were available, because in their early stages they are very slow in their progress. Since Mr. Crook has discovered their high merit for bedding uses, a large stock is kept up for the dual purpose—indoor and out. July and August would be a suitable period for sowing for the summer of 1903.—W. S.

## Groups at Holland Park Show.

The following are notes on some of the groups at the recent show at Holland Park: Messrs. Hill and Son's (Barrowfield Nurseries, Lower Edmonton, London, N.) group was arranged with excellent judgment, and including the following distinctive and handsome Ferns and plants: *Gymnogramma Alstoni*, *G. grandiceps superba*, *Adiantum tinctum* (finely coloured red), *A. peruvianum*, *A. pedatum* (the Bird's-foot Fern), *A. rhodophyllum* (also coloured), *A. macrophyllum* (tinted purplish), *A. Farleyense* (a soft, feathery mass), and *A. Veitchei*. The beautiful little *Pellea rotundifolia* was nicely shown, together with *Pteris tricolor*, which was brilliantly distinctive, *P. longifolia Mariesi*, *P. seaberula*, and *P. Smithiana*. Other genera exhibited were *Davallia tenuifolia Veitchei*, *Polypodium vacciniifolium*, with long, hispid shoots, which hang; the tall *Blechnum brasiliense*, and the twining *Lygodium japonicum*. *Platyserium grande* was also bold and characteristic. *Hymenodinium crinitum* is a nice thing, and *Lomaria attenuata* is well known. *Polypodium appendiculatum* and *Lygodium dichotomum* with *Leucostegia immersa* were others of those shown. *Ficus repens variegata* and *Saxifraga umbrosa variegata* were displayed in front. Cork-bark and moss were largely employed, and many of the Ferns were on tall pedestals.

In Charles Turner's (Slough) group of Roses, the standard *Wichuriana* crosses formed a very conspicuous feature; budded as they were on stocks 3ft. or more in height, the slender branchlets drooped shower-like on all sides in the umbrella pattern. A number of different varieties, though all from the same cross, were seen, the best being *Auguste Barbier* (pink), *Alberic Barbier* (white), *Paul Transon*, and *Reine André*. The more popular H.T.'s and decorative Roses were arranged along the front in vases, while large masses of *Crimson Rambler*, *Queen Alexandra Rambler*, *Aglaia*, and *Psyche* gave the group a rich effect.

Messrs. Frank Cant and Co., Braiswick Nurseries, Colchester, were first in class 14 for a collection of thirty-six bunches of garden Roses, the names of which we took, but, unfortunately, they have gone astray. A similar group was shown by the same firm last week at the Temple,

when the varieties noted were *Gustave Regis*, *Aglaia*, *Reine Olga de Wurtemberg*, *Ma Capueine*, *Madame Louis Poucet*, *Crested Moss*, *Madame Cochet*, *Rainbow*, *Thalia*, *Camoens*, *Macrantha*, *Souvenir de J. B. Guillot*, *Claire Jacquier*, *Leuchstern*, *Fellenberg*, *Papillon*, *Mme. Pernet Dueher*, *Rubin*, *Anna Maria de Mont-ravel*, *Gloire de Polyantha*, *Annie of Gierstein*, *W. A. Richardson*, *Rosa Mundi*, *Alister Stella Gray*, and *Blanche Double de Coubert*. Each of these has a telling effect when planted and allowed to grow in great masses with little pruning in the garden or grounds. On page 31 we figure Messrs. F. Cant's group.



Holland Park Show—Hill's Group of Exotic Ferns.

The Begonias from Messrs. Blackmore and Langdon, Twerton Hill Nursery, Twerton-on-Avon, Bath, were of exceptionally high quality. The strain is certainly a superior one of good habit, and the culture given to the plants had resulted in large flowers of the best shape. The illustration on page 37 will testify to these remarks. A number of their finer varieties were noted as follows: Captain Henderson, a very handsome scarlet; Lady Wilmot, dark crimson, flowers sometimes 6ins in diameter; Mrs. Kendall, rose-blush; Mrs. G. F. Hodder, a very attractive pink, with a lighter centre; Ophelia, crimson; Seagull, spotless white; and Sunset, orange-scarlet; all of which are double-flowered tuberous Begonias. As a

general rule, single flowers are preferred, on the grounds of gracefulness and beauty-character, to double ones; but there are exceptions, and double tuberous Begonias give an instance. Here the flowers are full and rich, having something "to look at," rivalling in their best forms even the Roses.



Holland Park Show—Turner's Group of Roses.

## Early Forced Fig Trees.

**SECOND CROPS.**—The fruits on early forced trees have now swelled to a good size, and, being judiciously thinned, there will be a crop of good Figs towards the latter part of the summer. To insure this the foliage must be kept free from insects and the feeding liberal. When the crop is heavy and the former thinning not having been sufficient, a second thinning should take place at once, leaving the most forward at the base of the shoots, which will ripen earlier than the others, and so afford more time for the ripening of the shoots at their points, these being kept well up to the light. Early forced planted-out trees should have the young wood ripened and be resting by the middle of October.

**WATERING AND FEEDING.**—If the borders in the house started at the new year have become dry whilst the first crop of fruit was ripening, they must be watered repeatedly until the soil is properly moistened through to the drainage. Liquid manure will be required by trees having the roots in borders of limited extent, and more frequently than by trees with a large extent of rooting area; about once a week in the first case and every fortnight in the other, giving thorough supplies; and always in a tepid state. Top-dressings of fertilisers may be given at intervals of three weeks or a month, always after watering, and then washing in moderately. A light mulching is beneficial in supplying nutriment, keeping the soil moist, and encouraging surface roots, but it should be kept moist by sprinkling when it becomes dry.

**SYRINGING AND INSECTS.**—Syringe the trees twice a day, except in dull, wet weather, when morning or early afternoon syringing will be sufficient, and always early enough to allow the foliage to become dry before night. Judicious and forcible syringings are usually sufficient to keep down red spider, but if it and scale gains a footing they must be dislodged by the use of an insecticide, for which the carbolic acid and petroleum soft-soaps are effective. Old scale must be dislodged by a brush. Painting the hot-water pipes with a cream formed of flowers of

sulphur and skim milk, after heating them to 160deg to 200 deg, keeping the house closed for an hour or two with the sulphur on the pipes, is an effectual remedy for red spider and a good preventive of spotting in the fruit from attacks of fungus. The foliage should be dry, and the following morning the trees should be well syringed. Repeat the heating of the pipes and brushing them with sulphur in about ten days.

**TEMPERATURE AND VENTILATION.**—Unless the weather be unusually cold and wet artificial heat will not be necessary, but fire heat must be afforded to maintain a temperature of 60deg to 65deg at night and 70deg to 75deg by day. Ventilate early on fine mornings. Keep the house through the day at 80deg to 85deg with sun heat, and close early so as to run up to 85deg or 90deg, or even 95deg to 100deg, providing abundance of atmospheric moisture.

**FRUIT RIPENING.**—When the Figs change colour afford more air, insuring a circulation. Reduce the moisture gradually, keeping water from the fruit, which expose as much as possible to light and air. Lessened supplies of water tell in favour of quality, yet keep the soil moist, damping the surface occasionally.

**TREES SWELLING THEIR CROPS.**—Afford a light mulching of short manure, and through this supply tepid water, or in the case of trees carrying heavy crops and not over-luxuriant, liquid manure with alternate dressings of artificial manures. It is scarcely possible to overfeed Fig trees in well-drained, properly constructed, narrow borders, but deep borders and wide favour growth at the expense of fruitfulness. The trees grow splendidly and produce little beyond leaves. In fine weather syringe twice a day, always in good time, and close so as to run up to 90deg, 95deg, or 100deg. As the fruit approaches ripening provide a little ventilation before nightfall and let it remain, increasing it early so as to dissipate moisture deposited on the foliage during the night before the sun acts powerfully on the house.

Grand Figs are grown in cool houses, one crop ripening in August and September. Calcareous soil, well-drained narrow borders, light well-ventilated structures afford best results. The chief points are to grow them, feed highly, ventilate early, close soon enough to keep a good heat until the evening, affording abundance of atmospheric moisture. Avoid overcrowding the growths, stop side shoots at the fifth leaf, and water liberally. Let the shoots grow with their points to the light, just keeping them clear of the glass, and they will fruit abundantly.

—GROWER.





### The Judas Tree.

In reference to the Judas Tree (*Cercis siliquastrum*, page 534, No. 2,803 of the *Journal of Horticulture*), the "Westminster Gazette" states there is not more than four specimens in England. Are you or the "Gazette" aware there is a fine specimen on this estate (Wellbury, Hitchin), 18ft high, 15ft through, and twenty-seven years of age? I think perhaps this one is unknown to horticultural friends.—CONSTANT READER.

[We did not know that so fine a specimen existed, but we believe that the computation as to numbers by the "Westminster Gazette" is far from being correct.—ED.]

### Do Bulbs Rest?

Your correspondent, "Y. B. A. Z.," asks, "Do Bulbs Rest?" I have been puzzled with the behaviour of *Tropæolum pentaphyllum*. I planted early last year two tubers, one at the foot of a south wall and one of a west wall. They broke at the beginning of October. With some protection they weathered the winter, and one is now growing away with fair vigour and the other more weakly. A tuber planted last year, also on a west wall, broke early, and was a lovely sight, growing about 10ft high, and blooming profusely; this was left undisturbed in the ground, but it shows no sign of starting. Examination shows the tubers to be sound, but I am afraid shall have to wait till autumn, when they may start at an unfavourable season. Another plant I have, tuber left in the ground, has broken, and is growing favourably. I wonder if any special treatment will ensure the growth starting early for the summer bloom?—T. J. T.

### Princess of Wales Violet in Summer.

I can fully bear out what your correspondent remarks of pot plants of this Violet flowering in summer. It does so here regularly, and, I think, though the blooms are not so large, that they are even more beautiful than those of the first crop. I made a cross of double white *Narcissi* and these Violets last month, which formed an altogether lovely combination. But, in addition to flowering so late, it is possible, by allowing the runners to grow after the plants have been housed in autumn, to secure a second crop of bloom from these, flowers being produced from the axil of each leaf.—R. P. BROTHERSTON.

### Trees and Shrubs in Scotland.

You must have a large number of readers in Scotland, although little appears in your columns directly applicable to difficulties and successes there. The letter by "D. C." in the current issue of the *Journal* will be interesting to many. Numerous shrubs and plants flourish here under conditions that appear totally antagonistic to their assumed characteristics. The experiences of your readers, where success has resulted, would enhance the attractiveness of many places that are presently given over to Cherry and Portugal Laurels. In my garden on the Firth of Clyde, I can to-day gather a basketful of Roses, among them such reputed shy bloomers as *Perle des Jardins* and *Devoniensis*; while *Gustave Regis*, *Allister Stella Grey*, and such free bloomers are laden down with buds. Two bushes of *Choisya ternata* are growing strong, and are full of sweet white blossoms. An *Escallonia macrantha* reaches the top of a wall, 12ft or 15ft high, and in another position forms a dividing hedge. A *Clematis montana* threatens to strangle a Cherry tree, while *C. vitalba* is executing a like murderous office upon a Rowan, and the large flowered varieties make pictures on the walls. Rosemary and Lavender both bloom. *Passiflora cærulea* and the white variety push among the Ivy, and deck it with their starry blossoms. A *Camellia* of small size, in a sheltered spot, perfected a considerable number of blossoms. An *Arbutus* was cut down by frost some years ago, but has started away again, and bears blooms and fruit. The truth lies in "D. C.'s" comment that we accept as gospel what has been handed down to us, and make no effort to prove the adaptability of the numerous lovely things which merge upon the line of "not quite hardy."—AN OLD READER.

### Profitable Apples of Upright Growth.

In replying further to "Beginner," let me say that Lord Grosvenor is a compact, yet strong, upright grower. Bramley's Seedling spreads considerably, but as it grows strongly and upright when the trees are young, by pruning it can easily be kept in a condition suitable for "Beginner's" purpose. Duchess of Oldenburg is quite an upright kind, and a grand cropper to boot. Beauty of Bath and Pott's Seedling are also upright growers. I have just been looking at a heavily laden tree of Frogmore Prolific, and it reminds me that I should have included it in my former lists, as it is a grand Apple, and grows upright. I have seen splendid samples of Allington Pippin growing in a stiff soil, where it crops well, and it seems to me that it must become a popular market sort. Golden Spire seems to be little known, but it is a grand cooking Apple, which crops as well as Lord Suffield; but the fruit is longer, and very much brighter in colour. It is usually ripe by the end of September, and grows quite upright.—H. D.

### Violas at Tamworth.

The midland town of Tamworth, so noted for its potteries and celebrated breed of pigs, has during recent years become associated in the gardening world as the birthplace of many of our best Violas, and being an ardent fancier of this flower I had long entertained an idea of visiting this centre to inspect the nurseries of Mr. W. Sydenham, and, receiving a cordial invitation from that gentleman, I proceeded the first week in August of last year to Tamworth. Most of your readers will remember the violent gale the Saturday before the Bank Holiday which did so much damage throughout the country, especially to our fruit and market crops, and didn't it just blow at Tamworth!—yes, and rain, too! But to enthusiasts the weather matters little at any time, so we were not deterred from walking through the beds of Violas—and such beds, too! It seemed to me each bed of the popular varieties would contain about a thousand stock plants, while the others would contain half that number. I leave the reader to imagine what one hundred and sixty varieties of such beds would look like—to me they were a perfect sea of flowers—covering quite an acre of ground.

When we consider the number of cuttings a bed of such dimensions will produce it will give some idea of the vast quantity required here for propagating purposes. The effect produced by the bewildering shades of colour was simply charming, for though the wind had played such havoc with the herbaceous plants and the early-flowering Chrysanthemums in the open quarters, its only effect on the Violas was to blow them all one way; but after the wind decreased and the sun shone forth, in an hour or two they were as happy looking as though there had been no wind in the Midlands for months.

As Mr. W. Sydenham is now so noted as a raiser of Violas, I naturally expected to see a goodly number of seedling beds; but the quantity was an eye-opener for me, for there were literally thousands and thousands of them—beds devoted to distinct colours, such as white, yellow, and blue, and so on, while huge breadths of the mixed colours were all in the full beauty of their youth. I gathered that, although Mr. Sydenham does artificially cross-fertilise, his experience has been hitherto that his best seedlings have come from chance seed gathered from the best varieties—an easy matter at Tamworth, for the seed of each variety is saved separately, so that the parentage is always known, at least, so far as the seed parent is concerned. To a Viola fancier these beds were most interesting, and I spent a very pleasant hour looking over the likely-looking youngsters. Ten years ago one might have selected a hundred that would have been worthy of a name; but things have altered, ideas are now narrowed down, for the advance made during the last decade with this flower has been pretty considerable, and a variety that would have been considered a gem a few years ago must now be passed over, for the Tamworth varieties are not only noted for their flowers, but also for their habit of growth, and a form, however good the flower, is considered a weed by Mr. Sydenham unless the habit be good also. And I think this is as it should be, for although the Viola exhibitor has to be considered, the general public must come first, and the life of a Viola is indeed short if it should prove to be a bad garden flower. Some capital novelties were marked for further trial, and it seemed to me a goodly number of others were worthy of similar notice, the seedlings from Lark being especially noticeable.

I observed that a change of ground is deemed as necessary here as at most places, and *Narcissi*, *Roses*, *Chrysanthemums*, and herbaceous plants are used extensively as change crops, and, in spite of this, large square patches of the paddocks have also

been called into requisition. I did not ask Mr. Sydenham his views on this point, but my own personal experience has been that fresh soil becomes an absolute necessity, no matter how it is manured or cultivated; for after a few years there seems to be something lacking which cannot be replaced except by fresh ground, and this is the experience of my friends also.

The soil at Tamworth appears to be a reddish sand—the same colour as their pigs—overlying a sort of clay; an ideal soil for working, and, judging from the luxuriant growth of all classes of plants, a most generous one. That the *Violas* are not grown on strictly temperance lines I readily observed from the huge heaps of peat moss manure packed ready to go on the ground as the crops come off, amounting to two or three hundred tons, and I was told much more was used during a season. No doubt this holds the moisture, apart from its fertilising properties, and accounts to some extent for the healthy growth of the plants.

One can readily imagine that such a vast quantity of plants must make the propagation a serious item, and large frame grounds are provided for this accommodation. The frames used are just like miniature span-roofed houses, and the lights are fixed to the ridge with hinges, so that either side can be readily lifted for any purposes. Each frame holds about a thousand cuttings, and as some hundreds of them are utilised it will give some idea of the number of plants propagated in them. At the time of my visit early propagation was in full swing, and the soil being naturally adapted for this purpose, no preparation is required. I shall reserve my notes on the new and old varieties for a future issue, or I shall have the editor using the scissors and paste to bring my notes down to a respectable length. —J. B. R.

## Societies.

### Royal Horticultural—Drill Hall, July 8th.

An interesting meeting and well-filled hall was that on Tuesday last, though Orchids were fewer than at any time during the past season. Messrs. B. S. Williams and Son staged a mixed group and Messrs. Hugh Low and Co. had *Cattleyas*, other plants coming from Messrs. Veitch and Bull and Sons.

Hardy plantsmen were strongly in evidence, and Messrs. Barr and Sons had Sweet Peas in liberal quantities. Besides these, they had in their group *Iris monspur*, *Lychnis Haageana* and *L. chalcedonica*, *Phlox viscosa*, and other good plants, notably *Delphiniums*. Mr. Amos Perry and Messrs. Pritchard had also nice groups, the former staging *Calochorti*, *Heuchera sanguinea splendens*, and others, with *Ostrowskia magnifica* in capital condition.

The *Petunias* from Mr. J. Surman, of Beckenham, were all well flowered and the blooms were large, but Messrs. Cutbush's *Carnations* were one of the chief features of the show. Their varieties included the following, among others:—*Nautilus*, blush-pink; *Lady Rose*, deep pink; *Maggie Hodgson*, rich dark crimson; *Mrs. Trelawny*, very bright deep crimson; and a large group of the yellow *Cecilia*.

Single-flowered tuberous *Begonias* came from Messrs. Cannell, the finer being to our minds Sir J. Lyne, rich bright crimson; *Lady Wyndham*, salmon; *Seymour Lucas*, rich crimson; *Mrs. Brook Taylor*, Apple-blossom tint; and *Martial*, scarlet crimson. A back row of *Kochia scoparia* in 5in pots was of value. Stove and greenhouse foliage plants (a fine group) came from Mr. J. Russell, of Richmond, and Mr. H. B. May had grouplets of distinctive and good Zonal *Pelargoniums*.

Another feature of the exhibition was Messrs. Kelway's group of cut *Delphiniums*. These were strong and good, and some beautifully-coloured varieties were noticed. We name a few:—*Queen of Huish*, *Dorothy Daniels*, *Lord Rothschild*, *Earl Roberts*, *Clara Stubbs*, and *Glory*. Besides their Orchids, Messrs. Veitch staged a number of new seedling *Polyanthi* *Roses*, one of which, named *Rito*, is a single-flowered variety coloured bright pink. A choice collection of the best seasonable shrubs in cut sprays was also shown by them. *Cornus Kousa* and *Escalonia philippiana* were noticed. Paul and Son, of Cheshunt, had also a group of cut shrub sprays, chiefly foliage shrubs.

At the north end of one of the tables *Lady Nina Balfour*, of Newton Don, Kelso (gardener, Mr. W. Wood), presented blush *Malmaisons* in pots, and the plants were really very fine. The blooms (and there were many of them) were large and good. Messrs. Bull and Sons, King's Road, Chelsea, staged *Dracænas*, three good sorts being their *D. Victorise* (yellow), *D. Coulingi* (white and green), and *D. Lord Roberts* (dark red). The Colchester firm of Messrs. B. R. Cant and Sons staged new *Roses*, among which we noted a pure white H.P. named *Frau Karl Druschki*, which ought to come well to the front, being so distinctive and otherwise good. Their semi-double crimson sort, the *Maharajah*, was much admired, and so likewise the new H.P.

*Ben Cant*, the famous Liberty, *Mrs. B. R. Cant*, and *Killarney*, which was shown to perfection.

Messrs. Clibran, of Altrincham, contributed a basket of their new *Lobelia* *Mrs. Wm. Clibran*, a deep dark blue with white eye, and very telling as a bedder for ribbon borders.

From Percy Waterer, Esq., of Fawkham, Kent, came close upon 130 vases of Sweet Peas, which were tastefully arranged with grasses and Fern, and the stand was draped with pale green muslin. Two handsome epergnes graced the ends of the long tabling devoted to the exhibits. We learn that about 100 varieties were represented, twenty of which are new varieties raised and flowered this year for the first time, and introduced last year by himself. Altogether something like 5,000 trusses of this useful decorative flower were staged.

Lord Rothschild, Tring Park (gardener, Mr. E. Hill), sent 160 plants of *Carnation Cœilia* in 7in pots bearing blossoms, many of which were between 5in and 6in in diameter. They were nicely arranged with *Pteris* Fern at the base, and the grass of the *Carnations* looked the picture of health. We have only one fault to find with this exhibit, and that is the plants were far too tall, many being nearly 5ft in height.

Messrs. T. S. Ware, Limited, Feltham, staged a very fine collection of hardy plants, including several alpinists. *Delphiniums* were represented in great variety, as were also *Phloxes*, *Campanulas* (one *C. persicifolia* *Moerheimii* being particularly handsome; it is a double white), *Geums*, and *Lychnis Haageana hybrida* (a splendid scarlet). Many others were staged, all of great merit and interest.

Messrs. Hugh Low and Co., Enfield, staged a group of miscellaneous plants, in which *Phœnocomma prolifera* *Barnesi* represented by a few specimens. *Trachelium cœruleum*, *Dracophyllum gracile*, with *Crimson Rambler Rose* and *Nymphæas* in trays, with Ferns in variety, were evidences of good cultivation of an interesting though small group.

### Fruit.

Messrs. Geo. Bunyard and Co., Limited, Maidstone, sent pot Cherries, the tree being in 10in pots, standing 3ft to 4ft high, and with sturdy, well-ripened shoots. Each bore a numerous complement of fruit clusters. In front of the trees were dishes of Cherry fruits, and we noted the following varieties:—*May Duke*, *Noir de Schmidt*, *Turkey Heart*, *Bedford Prolific*, *Waterloo*, *Florence*, *Governor Wood*, *Kentish Red*, *Windsor*, *Frogmore Bigarreau*, *Knight's Early Black*, *St. Margaret's*, and *Belle de Choisy*.

Gooseberry *Hönings Frieste*, which is not unlike our "Sulphur," came from Mr. J. Hönings, Neuss-on-Rhein, Germany, and a dish of well-preserved Apples—variety *Lord Beaconsfield*—from Mr. John Watkins, Pomona Farm, Hereford (who supplied the Apples to the King lately, we believe), received a vote of thanks. Nine fine *Queen Pine* Apples from Lord Llangattock (gardener, Mr. T. Coomber), The Hendre, Monmouth, were, as usual, of great interest. Mr. J. Crook, Ford Abbey, Chard, contributed *Dioli Amsden* Peaches gathered on June 26 from cool house trees. From Colonel Vivian's garden, at Reed Ashton, Trowbridge, Mr. Strugnell, the gardener, sent a fine fruit of *Melon Western Hero*, moderate in size, round, yellow in colour, and lightly netted. Messrs. Laxton Bros., Bedford, furnished a collection of Strawberries—The Laxton and Trafalgar in boxes, while Carter's *Endive Lettuce* came from Swanley Horticultural College. For an exhibit of Mushrooms (*Cuthberts' spawn*), Mr. Geo. Kelf, gardener at South Villas, Regent's Park, was awarded a cultural commendation.

### Medals.

FRUIT COMMITTEE.—Hogg Medal to Lord Llangattock, Hendre Gardens, Monmouth, for Pine Apples. Silver Knightian Medal to Messrs. Geo. Bunyard and Co., Royal Nurseries, Maidstone, Kent, for Cherries in pots and gathered fruit.

FLORAL COMMITTEE.—Gold for group of Sweet Peas to Mr. P. Waterer, Fawkham, Kent; Silver-gilt Flora for *Carnation Cœilia*, Lord Rothschild, Tring Park, Tring; Silver-gilt Banksian for hardy trees and shrubs, Messrs. Paul and Son, Cheshunt; for single *Petunias*, Mr. J. Surman, Beckenham; for hardy plants, Mr. Amos Perry, Winchmore Hill; for *Delphiniums*, Messrs. Kelway and Sons, Langport. Silver Flora for stove and greenhouse plants, Mr. J. Russell, Richmond; for *Malmaison* *Carnation*, *Lady Nina Balfour*. Silver Banksian for single *Begonias*, Messrs. Cannell and Sons, Swanley; for hardy plants, Messrs. Barr and Sons, King Street; for new *Pelargoniums*, Mr. H. B. May, Upper Edmonton; for cut *Carnations*, Messrs. Cutbush, Highgate; for hardy plants, Messrs. T. S. Ware and Sons, Feltham; for hardy plants, Mr. M. Prichard, Christchurch; for plants and Water Lilies, Messrs. Lowe and Co., Enfield. Bronze Banksian for *Delphiniums*, Mr. G. Ferguson, Weybridge.

ORCHID COMMITTEE.—Silver Banksian Medal for group of Orchids to Messrs. Hugh Low and Co., Enfield.



**Awards.**

*Alstromeria* Mrs. Salter (J. H. Salter).—A very fine form, with orange-red flowers. (Award of Merit.)

*Carnation Lady Carrington* (Martin R. Smith).—A large pink after the colour of Miss Joliffe, but much larger. (Award of Merit.)

*Delphinium Kitty Wardall* (Kelway and Son).—A double form, with shaded flowers and a fine spike. (Award of Merit.)

*Dracena His Majesty* (H. B. May).—A fine variety with broad leaves; copper, heavily edged bright red. (Award of Merit.)

*Lobelia coronopifolia* (J. Bennett Poë).—A large flowering blue Lobelia, growing about 2ft. high. (Award of Merit.)

*Polypodium iriodes ramocristatum* (W. Bull and Sons).—A fine form with crested tips. (Award of Merit.)

*Rose Frau Karl Druschki* (B. Cant and Sons).—A white Hybrid Perpetual of grand form and pure colour. (Award of Merit.)

**Richmond Horticultural, July 2nd.**

Notwithstanding the special effort at publicity made by the responsible officials of this Society, situated, as Leopold de Rothschild so happily says, "In one of the most beautiful parts of fair Surrey," the latest exhibition, on Wednesday week, was not all the success it was hoped it would be. First of all, the attendance was poor, showing that the Richmond folks are either worn-out with visitations and sight-seeing, or that the finer sense to appreciate the most beautiful in Nature has yet to be developed. We think it reflects discreditably on the public taste, and especially the local taste, when their own horticultural exhibitions are treated with indifference. Certainly the committee, the secretary, and others in connection with the society had made every effort to recoup the weak finances of the society, and their work has gone largely unrewarded. The show, too, was less in size than on former occasions, which is accounted for by the fact that on the same day the National Rose Society held their exhibition, and the Croydon folks also enjoyed their little display.

It was a singular thing that three such shows, so near to each other in London, should have been fixed for the same date. The wretched weather which prevailed until a couple or three weeks ago told heavily on the entries, and of course there are growers who will not show at all unless their plants and produce is up to the highest attainable standard, which is praiseworthy, though at times an effort or efforts might be turned in another direction, so that the show may not suffer through their absence.

Though Roses were hardly so good, yet such plants as Gloxinias and Begonias made it up somewhat, and certainly vegetables were exceedingly fine, while the cut flower classes and the non-competitive exhibits of hardy flowers were all very satisfactory. After judging, on the show day, the committee entertained the judges to luncheon, at which we were unable to attend. A pleasant gathering and meeting was recorded, with Mr. Skewes Cox, M.P., in the chair, and the Mayor of Richmond on his right.

Limitations of space debar us from expanding our report of the prizes awarded, or of the classes and the recipients. Messrs. F. Cant and Co., of Colchester, as intimated in our report of the N.R.S. Show in last week's Journal, were first for four dozen distinct Roses, with an even set of good blooms. Messrs. D. Prior and Son, also from Colchester, were creditable as second, the latter winning for the twelve distinct. The open Rose class awards, however, fell solely to these two entrants, and the name of Mr. R. E. West, of Reigate, was to the fore in twenty-four distinct in the amateurs, and also for the dozen. Mr. W. C. Romaine, an amateur rosarian, succeeded in taking firsts for the twenty-four and the twelve. Condensed, we give a further list of awards:—Group of plants arranged for effect: H. E. Fordham, Twickenham, first. Six Pelargoniums, distinct: Max L. Waechter, third. Six exotic Orchids, distinct: Sir Frederick Wigan, first. Six exotic Ferns (limited to exhibitors residing in the society's district): Sir F. Wigan, first; D. H. Scott, third. Six Caladiums, distinct: C. M. Bartlett, first. Nine Gloxinias: Max Waechter, first; C. M. Bartlett, second; Councillor J. B. Hilditch, third. A bouquet for the hand: W. Hayward, Kingston, first; Miss C. B. Cole, second. Most tasteful table decoration (open to lady amateurs): Miss C. B. Cole, first; Mrs. Noy, second. For semi-circular group of plants arranged for effect (open to amateurs and gentlemen's gardeners only): Sir F. Wigan, first; C. M. Bartlett, second. For twelve distinct varieties of Sweet Peas arranged in separate vases, with Gypsophila, Ferns, and other foliage: Mrs. Brewer, Suffield House, Richmond, first; Mrs. H. Michels, second; James Munro, third. For best collection of cut flowers, hardy herbaceous perennials, bulbs excluded (open to all exhibitors): Mr. H. L. Warde, Petersham, first.

**FRUIT.**—Best dish of Strawberries: Mrs. H. L. Warde, first. Best Melon: Sir F. Wigan, first; Mrs. Wigan, second; Justice Swinfen Eady, third. Nine Peaches: G. C. Raphael, first. Three bunches of Grapes (black): Earl of Onslow, first; W. E. Wells, second; L. J. Baker, third. Three bunches of Grapes (white): Justice Swinfen Eady, first; L. J. Baker, second. Twelve dishes of vegetables: Lord Aldenham, first; Colonel Bosworth, second.

Brace of Cucumbers: Mrs. Cooper Coles, first; W. H. E. Wells, second; Max Waechter, third. Dish of Tomatoes: Mr. Justice Swinfen Eady, first; Councillor J. B. Hilditch, second. Collection of six vegetables: Colonel Bosworth, first; Richard Keene, second; J. Harbird, third.

**SPECIAL PRIZES.**—For a collection of fruit, six dishes, distinct: G. C. Raphael, first; Mr. Justice Swinfen Eady, second; L. P. Baker, third. For twenty-four Roses, distinct: R. E. West, Reigate, first; Mrs. Noy, second. For most tastefully arranged basket of Roses: Miss C. B. Cole, first; Mrs. Franks, Kingston Hill, second; Miss Stepheni Hallett, St. Margaret's, third. For six plants in pots, suitable for table decoration (open to all exhibitors): Mr. Justice Swinfen Eady, first; H. Compton, second. For a single specimen Palm: C. Want. For a single specimen fine foliage plant: Sir F. Wigan, first; H. Compton, second. For six hardy Ferns, distinct varieties: D. A. Scott, first; Mr. W. Skelton, second. For a basket of plants arranged for effect: Mrs. H. L. Warde, Petersham, first; H. Little, second. For a single specimen of plant in flower: Mrs. Cooper Coles, first; Max Waechter, second. For six bunches of Sweet Peas, distinct varieties: H. Compton, first.

**National Rose, July 2nd.**

We were incorrect in reporting that no Gold Medals were awarded for new Roses at the Society's show last week. The official lists of award state that a Gold Medal was awarded to Messrs. Frank Cant and Co., Colchester, for their new H.T. Lady Roberts; and another to Mr. George Prince, Oxford, for new Rose Souv. de Pierre Notting, mentioned in the *Journal of Horticulture*, May 1, p. 381. The following medals were awarded for non-competitive groups:—Silver-gilt Medals to Messrs. G. Jackman and Son, Woking. Silver Medals to Mr. C. Turner, Slough; Messrs. Spooner, Woking; Messrs. Laxton Bros., Bedford; Messrs. G. Bunyard, Maidstone. Bronze Medal to F. R. Curtis, Esq., Colchester.

Mr. O. G. Orpen, Hillside, West Bergholt, Colchester, in the amateurs' section, had as fine a set of nine exhibition varieties in vases as any in the nurserymen's division. He was first in class 60, but no other prizes were awarded, though two more entrants showed.

**Southampton, July 1st and 2nd.**

The annual summer exhibition of the Royal Southampton Horticultural Society was held as usual on the Royal Pier, and was in every way a success.

Competition was keen in the majority of classes; while the exhibits left little to be desired. Roses and vegetables were especially well shown. In the latter department no less than forty-one exhibitors taking part in the six classes set apart for collections, making an exceedingly fine display of high class produce. As usual the arrangements were of a high order of merit, as is the case under the experienced guidance of Mr. C. S. Fudge, the secretary.

Plants were numerous. For a miscellaneous collection arranged as a central conservatory group, Mr. E. Wills, florist, The Nurseries, Winchester Road, Shirley, Southampton, was an easy first with a well blended arrangement of suitable plants—as Palms, Orchids, Lilioms, Geraniums, Ferns, &c. Mr. T. Hall, gardener to the president, Sir Samuel Montague, South Stoneham House, was a good second. The last named secured the leading award for four stove or greenhouse plants with well grown examples of Crotons, Ixora Williamsi, and Bougainvillea glabra.

Orchids were well staged by Messrs. Hooley Bros., Bitterne Park, Southampton, in the class for a group arranged for effect—Cattleya Harrisoni violacea, C. Warneri, C. Mossiae, with Odontoglossums in variety. Ferns were numerous and good. For four, Mr. F. M. Vokes, Birch Lawn, Sholing, secured the leading award; Mr. F. Cozens, Rownhams, second. Pelargoniums, Zonal Geraniums, and Gloxinias were very well shown by Mr. Hosey, gardener to J. C. D'Esterre, Esq., Elmfield Hill, Southampton, and Mr. Biggs.

**ROSES.**—Twelve classes were provided for these, and as the competition was keen the display was a good one. The principal class that for thirty-six blooms, distinct. Mr. Prince, The Rose Gardens, Longworth, Berks, secured the coveted award with an even stand of medium sized clean, fresh examples, the best being Souvenir d'Elise Vardon, Horace Vernet, Bessie Brown, Bridesmaid, La France, Marquis Litta, Duke of Edinburgh, Mrs. J. Laing, Marchioness of Dufferin, and Catherine Mermet; Messrs. D. Prior and Sons, Colchester, second; Mr. Rogers, The Bassett Nurseries, Southampton, third. Mr. Prince was again successful for twelve triplets, staging capital specimens of Marie Van Houtte, Maman Cochet, The Bride, Souvenir d'un Ami, Comtesse de Nadaillac, Souvenir de S. A. Prince, and Princess of Wales. Messrs. D. Prior and Sons followed closely for second place. Mr. Prince, with twelve Teas, was the most successful, with fully representative blooms of Mrs. E. Mawley, Bridesmaid, Maman

Cochet, The Bride, and Catherine Merimet; Messrs. Prior and Rogers following in the order of merit their names are given. For six blooms any one dark variety, Marquis de Litta won for Mr. G. W. Kent, gardener to Mrs. C. Croft Murray, Perivale, Ryde. Mr. Prince second with the same variety in good condition; four competing.

In the classes set apart for gardeners and amateurs there was brisk competition and a good display. For eighteen distinct, Mr. Kent easily secured the leading award with large fresh examples, of which La France, A. K. Williams, Helen Keller, and Suzanne Marie de Rodocanachi were the most prominent. Mr. W. Neville, gardener to F. W. Flight, Esq., Twyford, Winchester, was second with smaller blooms. Mr. Burden, gardener to G. M. Mellor, Esq., The Lodge, Bambridge, Isle of Wight, third. Mr. Neville had the best set of twelve Tea or Noisette varieties, staging Mrs. E. Mawley, Catherine Mermet, Marie Van Houtte, Niphetos, The Bride, and Anna Olliver. Mr. Kent second; Dr. D. Seaton, Lymington, third.

The most tastefully arranged basket of Roses was one contributed by Miss M. Snellgrove, Oxford Road, Southampton, a really charming combination of flowers and foliage. Miss

were remarkable for the quality of their flowers. Mr. F. Cozens, Rownhams, second.

Fruit was but sparsely staged. Mr. O. Eastwell, gardener to E. L. Walker Munro, Esq., Rhinefield, Brookenhurst, secured the leading award for two bunches black Grapes, staging medium sized, well finished examples of Black Hamburg. Mr. Bowerman, gardener to Lord Bolton, Hackwood Park, Basingstoke, second. Mr. Eastwell also secured the leading award for white Grapes. Strawberries were a feature of the show, so well were they staged. Mr. T. Hall won for two dishes: while Mr. J. Matthews, gardener to Mrs. Maltby, Sherecroft, Botley, won for one dish with exceptionally fine examples of Royal Sovereign.

Vegetables, as previously stated, were a distinct feature. In the class for six distinct varieties, prizes provided by Messrs. Toogood and Sons, seedsmen, Southampton, there were five entries. Mr. E. Beckett, gardener to Lord Aldenham, Aldenham House, Elstree, Herts, was an easy first prize winner with excellent examples of Wonderful Tomato, White Rocea Onion, Walcheren Cauliflower, and Southampton Wonder Potato. Mr. Davies, gardener to Lord Aberdare, Longwood House, Winchester, second; Mr. Bowerman third. In a similar class the



Holland Park Show—Blackmore and Langdon's Tuberosus Begonias. (See page 35.)

Wadmore, Brook House, Basingstoke, was an exceedingly close second. The last named had the most satisfactory arranged epergne, or stand of cut flowers, a combination that embraced good taste and effect.

Bouquets (bridal and ball) were best shown by Mr. F. Bailey, florist, Southampton, and Mr. E. Wills, 163, Above Bar, Southampton, both meritorious exhibits.

Hardy border flowers were an especial feature of the show, so well were they represented. For twelve bunches, Mr. B. Ladhams, The Nurseries, Shirley, Southampton, was a long way ahead of all other competitors, staging in his accustomed manner, so good was this exhibit that we give the names of all in the first prize exhibit. *Dictamnus fraxinella*, *Geum atrosanguineum* plenum, *Betonica superba* (very fine), *Iris gigantea*, *Coreopsis Eldorado* (an exceedingly fine variety), *Spiraea aruncus*, *Delphinium Navy Blue*, *Gaillardia maxima*, *Campanula persicifolia gigantea*, *C. p. Porcelain* (very fine), *Dianthus Abbotsfordiana*, and *Heuchera splendens*. Mr. T. Hall a good second.

Sweet Peas were also capitally shown. Mr. F. M. Vokes, Birch Lawn, Sholing, won first place for nine bunches arranged with their own foliage only, staging popular varieties, which

prizes offered by Messrs. Sutton and Sons, Reading, no less than seven competed. Here Mr. Gibson, gardener to R. W. Hudson, Esq., Danesfield, Marlow, succeeded in beating Mr. Beckett with a handsome exhibit of white Leviathan Onion, Magnum Bonum Cauliflower, Supreme Potato, Duke of Albany Pea, New Red Intermediate Carrot, and Perfection Tomato. In the second prize exhibit Mr. Beckett had superb Cauliflowers, Tomatoes, and Peas.

Trade exhibits added much to the interest of the show. Quite in the foremost rank of these was a huge bank of cut herbaceous flowers from Mr. Ladhams, comprising such subjects as *Gaillardias*, *Coreopsis*, *Delphiniums*, *Iris*, *Liliums*, *Pæonies*, and a splendid array of border Pinks in about six dozen bunches, for which Mr. Ladhams is famous.

Messrs. Rogers and Sons, Bassett Nurseries, Southampton, had Roses (in pots), shrubs and hardy flowers, all making an interesting exhibit.

Messrs. Dobbie and Son, Rothesay, had a huge bank of well grown Sweet Peas, Violas, and Pansies, including the bulk of popular, as well as many new varieties.



Messrs. Toogood, Southampton, displayed hardy flowers and annuals in great variety.

Mr. L. N. Newton, gardener to W. Garton, Esq., Reselands, Woolston, had a charmingly arranged group of Carnations, Gloxinias, Palms, Crotons, and Ferns, quite 20ft long and 8ft wide, as well as an additional group of well flowered Pelargoniums.

### Harrow Horticultural, July 8th.

With plenty of sunshine, and a fair breeze to boot, the Harrovians could scarcely help enjoying their delightful summer flower show on Tuesday last. The meeting place this year was in the grounds of Kennet House, where the little park and its surroundings are ideal for such an event. On the whole, the products exhibited were not beyond the average, if even up to it, but some splendid Roses were shown by the nurserymen. Our report is necessarily short, yet includes the best features. The officials of the Society do well, and their efforts deserve success. Besides the horticultural exhibition there are other attractions, such as a brass band, swing boats, and shooting galleries. The Harrow Horticultural Society was established in 1853, and is affiliated with the National Rose Society.

#### Roses, Open Classes.

The nurserymen's efforts here were of the greatest assistance, and a number of good exhibits were staged. In the class for thirty-six blossoms, distinct, the premier honours fell to Messrs. B. R. Cant and Sons, Colchester, with a fairly even set, including some good as well as some weak blooms. We name the collection as follows: Her Majesty, Ulrich Brunner, Mrs. John Laing, Marie Baumann, Mildred Grant, Gustave Piganeau, Caroline Testout, Marchioness of Londonderry, Lady Marie Fitzwilliam, S. M. Rodocanachi, Marchioness of Dufferin, and A. K. Williams. Second row: Le Havre, Papa Lambert, Comtesse de Ludre, Madame C. Ramey, Prince Arthur, Bessie Brown, Tom Wood, Innocente Pirola, Dr. Andry, Muriel Grahame, Duke of Wellington, and Mereville de Lyon. Front row: Helen Keller, Dr. Sewell, Madame Hoste, Jean Soupert, Fran Karl, Drunchki, Marchioness of Downshire, Madame G. Luizet, Xavier Olibo, Ulster, Reynolds Hole, Mrs. Cocher, and Dupuy Jamain. The second prize was awarded to Messrs. Prior, with strong blooms, which stood the warmth better than Cant's. Their best blooms were Souv. d'Elise, Charles Darwin, and Marie Verdier. The third award fell to Messrs. Paul and Son, with good representatives of Mildred Grant, Bessie Brown (best Rose in the show), and Mrs. W. J. Grant. The stands were all very fair, with few points to draw between them.

Mr. Geo. Prince, of Oxford, led in Class 2 for a dozen distinct Teas, with two or three good blooms, and the others poor for the exhibition standard. He had White Maman Cochet, Maman Cochet, The Bride, Golden Gate, Innocente Pirola, Bridesmaid, Souv. de S. A. Prince, Mme. de Watterville, Souv. d'E. Varden, Countess de Nadaillac, Muriel Grahame, and Mrs. E. Mawley. Messrs. Prior were second, and Messrs. B. R. Cant and Sons third.

Three collections of garden Roses were presented, and Messrs. Paul and Son were well ahead with a dozen distinct bunches. The heat soon affected these, yet the new Lady Battersea (H.T.) made a wonderfully fine show, also Marquis de Salisbury, W. A. Richardson, L'Innocence, Dawn, Camoens, Gustave Regis, Madame Ravary, and the little known Triomphe de Pernet Pere. The bunches were large and very fine. Second place was filled by F. Cant and Co., with fresh blooms, and Killarney, Marquis of Salisbury, Rubin, Boule de Nieve, and Madame Plantier were each very brilliant and beautiful. Third, Mr. Geo. Prince.

#### OPEN TO ALL AMATEUR GROWERS IN ENGLAND.

In Class 4, for two dozen Roses under this head, five good collections came forward, the leading exhibit coming from Miss Beatrice Langton, Hendon, who is doing well this season. She had one of the finest blooms of Mrs. W. J. Grant we have hitherto seen, and good flowers of La France, Madame Cusin (medal Rose in open amateur classes), Suzanne Marie Rodocanachi, and Madame G. Luizet. Mr. Edward Mawley was a good second, and contributed nice representative samples of Marie Baumann, Mrs. E. Mawley, and Mrs. W. J. Grant; third, Mrs. Adcock. Mr. Mawley carried off first honours for a dozen Teas and Noisettes, but they were indeed very weak, and the second place was filled by Mr. A. C. Turner, of Edgware.

#### OPEN TO MEMBERS ONLY.

The opening class here (No. 6) was exceptionally strong, so many as nine collections being staged, and Mr. Lewis S. Pawle was far and away superior here, both in quality of blooms and the manner of staging them. He included Marchioness of Downshire, Kaiserin Augusta Victoria, Her Majesty, La Fraicheur, Mrs. S. Crawford, Duke of Fife, Mrs. J. Laing (medal bloom), The Bride, Marquis Litta, Tennyson (new), and Suzanne Marie Rodocanachi, which was the best-coloured bloom of it in the exhibition. Mr. J. R. Cater was second, Mrs. Charles third. The other classes were fairly filled, but the staging of them left something to be desired.

#### Plants, Cut Flowers, &c.

In the other sections of the show the groups of plants from Mr. S. Gardner (W. Smith, gardener), which was first, and from Mr. J. N. Stuart (J. Fuller, gardener) second, were attractive features. Mr. J. N. Stuart led for four Begonias and Mrs. Charles was first for six exotic Ferns. The best six foliage plants came from Mr. Stuart, and the finest six plants in flower from Mr. T. Norman.

In the cut flower division for a collection of hardy border varieties the honours fell to Mr. A. E. Hargreaves, and many good lots were brought forward. Seven entered in Class 26 for twelve bunches of Sweet Peas, each sort distinct. Mr. S. Gardner was first, Rev. E. C. E. Owen second, and Mr. Lewis Pawle third. The display was highly interesting and creditable. In the succeeding class for six bunches of the same, Mr. A. K. Carlyon led and Mr. Grahame was second. Mr. S. Gardner beat Mr. J. T. Horley in Class 30 for a bouquet, the former having used pink Sweet Peas.

Fruit made but a minor show, the Strawberries being best, for a dish of eighteen Mr. G. A. Davis won against seven entries. Dr. Williams was first for Gooseberries and Mr. Hargreaves for Raspberries.

Vegetables were good on the whole, and a number of fine collections were on view. The first prize lot in Class 38 bore no name, and second Mr. F. Lovett and third Mr. Davis. For a basket of six kinds of salading Mr. Stuart had first.

#### Miscellaneous.

Mr. J. Lion, Stanmore, showed hardy plants in quality such as would do credit to any show, and well staged. Messrs. G. and A. Clark, The Nurseries, Dover, had also a good representative display, and Messrs. Paul and Son had cut shrub sprays and hardy flowers, while from Messrs. Cutbush and Son came cut Roses and Carnations similar in quality and variety to those noted by us at the Drill Hall.

### Croydon Horticultural.

At this show, owing to the numerous competing fixtures, Messrs. Cant did not exhibit as usual, but their absence was supplied by Messrs. Burch, who, in the open Rose classes, cut a very prominent figure. Mrs. Haywood was also a very successful competitor, and in the local classes Mr. W. J. Dart. Mr. C. A. Blogg had a remarkable collection of Cacti, and many fine plants were shown by Mr. J. R. Box and Mr. T. Butcher. Mr. Morris Prichard had a splendid lot of herbaceous plants, and Messrs. Cutbush some exquisite Carnations. A special feature of the show was the group shown by Mr. Bound, on behalf of Mr. J. Colman, which gained first place in its class. Mr. Shofield took the prize for the best Mrs. John Laing in the show, and the other winning blooms were the lovely La France and a Xavier Olibo. In the cottagers' classes there were many specimens of admirable quality both of fruit and vegetables.

**OPEN ROSE CLASSES.**—Forty-eight Roses, distinct: First, G. and W. H. Burch, Peterborough. Twenty-four Roses, distinct: First, G. and W. H. Burch. Twenty-four Roses, distinct: First, T. Butcher, George Street, Croydon. Twelve Roses, one variety: First, G. and W. H. Birch. Twelve Tea or Noisette Roses: First, G. and W. H. Burch. Thirty-six Roses, distinct: First and Challenge Cup, Mrs. Haywood, Reigate. Twenty-four Roses, distinct: First, Mrs. Haywood; second, Colonel T. H. Pitt, Maidstone. Eighteen Tea or Noisette Roses: First, E. M. Bethune, Horsham; second, Mrs. Haywood. Six Roses, distinct: First, Mrs. Haywood; second, Colonel Pitt. Twelve Roses, one variety: First, Mrs. Haywood; second, E. M. Bethune; third, Colonel Pitt. Twelve Roses, distinct: First, E. M. Bethune. Four Roses, distinct: First, E. M. Bethune. Nine Roses, distinct: First, Mrs. Lascelles, Sydenham Road North, Croydon; second, C. B. Crisp, Chichester Road, Croydon. Nine Tea or Noisette Roses: Third, C. B. Crisp. Six Roses, distinct: Second, Miss Thrall, Shirley; third, R. E. Mason, Vincent Road, Croydon. Six Tea or Noisette Roses: First, G. B. A. Shofield, Sutton; second, F. S. Rich, 18, Chichester Road, Croydon. National Rose Society's silver medal for the best bloom in classes 8 to 20: Mrs. Haywood.

**LOCAL ROSE CLASSES.**—Twelve Roses, distinct: First, Challenge Rose Bowl, and National Society's Silver Medal, F. W. Amsden, Chichester Road; second, C. B. Crisp; third, Mrs. Lascelles. Six H.P. Roses, distinct: First, W. J. Dart, Beulah Road, Thornton Heath; second, C. B. Crisp; third, Miss Thrall. Six Tea or Noisette Roses, distinct: First, Mrs. Lascelles; second, C. B. Crisp; third, F. W. Amsden. Six Roses, one variety: First, W. J. Dart; second, F. W. Amsden; third, F. S. Rich.

**OPEN TO ALL ENGLAND.**—Most tastefully arranged dinner table decoration: First, Mrs. W. H. Still, Addington; second, Mrs. A. C. Robinson, Wallington; third, Miss E. M. Robinson, Purley. Most tastefully arranged bouquet: Third, W. Collins (gardener to Alderman Barrow, Park Hill, Croydon). Twelve most graceful

plants for decoration: First, C. Lane (Mr. E. H. Coles, Caterham); second, G. Lewry (Mrs. Blake, Duppas, Hill Terrace).

**AMATEUR AND GARDENERS' CLASSES.**—Collection of Gloxinias: First, W. Collins; second, A. Martin (Mr. R. A. Thrale, Shirley Lodge). Cut Flowers, twenty-four varieties: First, C. J. Slater (Mrs. Haywood, Reigate). Twenty-four bunches hardy cut flowers: First, G. Lewry. Special prize new table decoration or table group: First, C. Lane; third, W. Collins. Twelve bunches Sweet Peas: First, J. Knapp (Mr. F. W. Amsden). Twenty-four cut blooms: First, J. Knapp; third, G. Prebble (Miss Thrale). Twelve bunches Gloxinias: First, G. Lewry; second, G. Prebble; third, C. Perrett (Mrs. Fuller, Dupas Hill). Six most graceful plants for table decoration: Second, A. G. Mason (Mr. F. S. Rich, 18, Chichester Road); third, C. Perrett. Twelve bunches cut flowers: First, C. Brooks (Dr. Reid, London Road); second, C. Perrett; third, A. G. Mason. Twelve bunches hardy flowers: First, J. R. Willis, 61, Avondale Road; second, C. Perrett; third, J. Eales (Mr. J. Glaisher, Heathfield Road, Croydon).

**FRUIT AND VEGETABLES.**—Three bunches black Grapes: First, H. Harriss (Mr. E. M. Bethune); second, W. Lintott, The Gardens, Marden Park. Three bunches white Grapes: First, W. Lintott; second, H. Harriss. Fifty Strawberries: First, W. Collins; second, W. Lintott. One Melon: First, C. J. Slater; second, H. Harriss; third, W. Lintott. Brace of Cucumbers: First, G. Prebble; second, G. Lewry; third, W. Collins. Six Tomatoes: First, W. Lintott; second, J. Johnson, Bramley Oak Gardens, Croydon; third, W. Collins. Dish of Peas: First, A. G. Mason; second, J. Johnson; third, F. Heading (Mr. C. B. Crisp, Chichester Road). Dish of Broad Beans: First, G. Edwards, Shirley; second, J. Johnson; third, W. Collins. Three Cauliflowers: First, W. Collins; second, C. Perrett; third, O. Jeal (Mr. N. Waterall, Waddon). Six Carrots: First, G. Edwards; second, W. Collins; third, J. Johnson. Six Turnips: First, G. Prebble; second, G. Edwards; third, C. Perrett. Six Beetroots: First, J. Johnson; second, G. Edwards; third, G. Lewry.

**SPECIAL PRIZES.**—Collection of salad: First, G. Lewry; second, C. Perrett; third, W. Collins. Most tastefully arranged flower stand: First, Miss Robinson, Purley; highly commended, A. C. Robinson, Wallington. Most tastefully arranged dinner table decoration: First, Mrs. R. Thrale, Coombe Road. Six gentlemen's buttonholes: No award.

**PLANTS.**—Six Caladiums, four varieties: First, G. Lewry. Specimen plant in flower: First, C. Lane. Specimen plant, ornamental foliage or Fern: First, C. Lane; second, G. Lewry; third, G. Eales. Six exotic Ferns, distinct: First, C. Walton, The Gardens, Seymour College, Whyteleafe; second, G. Eales; third, G. Prebble. Collection of cactaceous plants: First, A. C. Bogg, 65, Brighton Road, Croydon. Twelve Cacti, distinct: First, W. G. Child, 115, Frant Road, Thornton Heath. Twelve Succulents: First, W. G. Child. Six Fuchsias, distinct: First, G. Lewry. Six Coleus, distinct: Second, Mr. J. A. Spurgeon, Whitehorse Road, Croydon. Nine Ferns, distinct: First, G. Lewry; second, J. Galvin (Mr. H. Butcher, Purley). Nine Tuberous Begonias: First, J. Knapp, gardener to Mr. F. W. Amsden, 22, Chichester Road, Croydon. Six Fuchsias, distinct: First, C. Perrett; second, J. R. Willis, 61, Avondale Road, South Croydon. Group of plants: First, J. Galvin; second, G. Eales; third, C. Walton. Six Fuchsias, four varieties: First, C. Walton; second, C. Perrett; third, G. Eales. Six Tuberous Begonias, distinct: First, A. Martin (Mr. R. A. Thrale); second, A. G. Mason (Mr. F. S. Rich); third, C. Perrett. Six Ferns, distinct: First, J. Galvin; second, C. Stew (Mr. J. Chisholm, Addiscombe Lodge); third, A. G. Mason. Six Gloxinias: First, C. Stew; second, C. Perrett. Six Zonal Pelargoniums, distinct: First, G. Eales; second, A. G. Mason; third, C. Perrett.

At the conclusion of the judging the committee and officials dined together.

Mr. W. Gunner, who presided, after lunch proposed the toast of "The King." In proposing the health of the Judges, the chairman said they had been very fortunate in having three judges, two of whom they knew before, and one whose name was familiar throughout England, Mr. A. Dean. The weather had been diametrically opposed to horticultural arrangements, but in spite of the bad weather and of the National Rose Society's Show being held on the same day, they had a show of Roses. Mr. A. Dean, in reply, thanked them for coupling his name with the toast, and said he desired to render all possible praise to the committee for having got together such an admirable show. He congratulated them, too, on having their show in such a beautiful place. He trusted that the Corporation might be able to acquire it for the borough so that it should never pass into the hands of the builder. Hearty thanks having been passed to Mr. Reid for his kindness in lending his lovely grounds, the company adjourned to the show ground. In the course of the evening the prizes won in the cottagers' classes were distributed by the Mayor, accompanied by the Mayoress, and afterwards a vote of thanks to the Mayor was proposed by Mr. Gunner and carried with enthusiasm.

## Scottish Horticultural Association.

The monthly meeting of this association was held in 5, St. Andrew's Square, Edinburgh, on Tuesday evening, the 1st instant. There was a large attendance of members. After election of new members proposed at previous meeting, and the nomination of a number of candidates for membership, a paper was read by the secretary from Mr. Graham, Corstorphine, entitled "The Chemical Composition of Orchids and Their Culture." Mr. Graham's paper was of rather an abstruse nature, but was full of scientific information, and his cultural remarks, though brief, were of a most instructive character. A hearty vote of thanks was awarded to Mr. Graham, after a number of members had expressed their opinions.

Mr. Todd intimated the arrangements for the summer exhibition to take place on the 16th instant, and appealed to all horticulturists to assist in rendering the show a success by exhibiting subjects of interest.

There were a number of very interesting and beautiful exhibits on the table; the chief of which were, two vases of various Iris, chiefly German, from Mr. Comfort, president of the association, and were much admired. A very handsome and artistically arranged vase of Pyrethrum blooms was exhibited by Mr. Todd, containing a number of very best varieties for cutting purposes. Aphrodite was very fine, and is probably the best white in cultivation. James Salter was very bright. Mr. Todd also exhibited some beautiful Gaillardia blooms which were considered very early for the season. Also German Iris Princess of Wales, a very handsome pure white variety. Mr. Henderson, Whitehouse, Loan, exhibited a beautiful branch of Ceanothus dentatus pallidus, covered with beautiful bloom. Mr. Tate, Balcarres, Fife, exhibited beautiful spikes of Solanum Wendlandi; also a very handsome spike of Odontoglossum erispum, a very handsome spotted variety. Three vases of Fuchsia sprays were sent from Mr. Johnstone, Hay Lodge, Trinity. Mr. Grieve, Red Braes, exhibited Fancy Pansies and Violas, also stems of various interesting border plants, including the beautiful Heath-like Onosma taurica. The exhibitors were warmly thanked for their contributions.

The president referred in very feeling and appropriate terms to the tragic death of Colonel Ivison MacAdam, who had rendered very valuable services to the association, by his instructive lectures on chemistry, and suggested that an expression of regret be engrossed in the minutes. A vote of thanks to the chairman brought the evening's proceedings to a close.

## Metropolitan Public Gardens Association.

**OPEN SPACES.**—At the monthly meeting of the Metropolitan Public Gardens Association, held at 83, Lancaster Gate, W., the Earl of Meath, chairman, presiding, plan and estimate were submitted and adopted in reference to the laying out of a recreation ground in South Wandsworth, at the cost of one of the members of the association. Discussion ensued in reference to faculties granted by the Consistory Court of the London Diocese for the erection of buildings on churchyards, and it was stated that in the Holy Trinity (Stepney) case, in which the London County Council had applied for the revocation of such a faculty, whereby a public garden was being destroyed, judgment had been reserved. It was considered most important that every effort should be made to prevent the conversion of these valuable spaces into building sites, and it was decided to ask the London County Council to take steps, under the special powers they possess, to enforce the provision of the Disused Burial Grounds Act, prohibiting building on sites of this character. It was reported that Homefields Recreation Ground, Chiswick, in the acquisition of which the association had actively participated, had been opened to the public on June 13, and that the seats granted had been despatched. A report was received in reference to the proposed opening of St. Mary's and Walcot Squares, Lambeth, for the recreation of children. A letter was read from the Camberwell Borough Council stating that it had been decided to acquire a part of Grove Lane Board School site, and asking for the association's assistance in the laying out. It was decided to put in order the churchyard of St. Mary's, Whitechapel, provided the Stepney Borough Council undertook its maintenance as a public garden. Amongst a number of proposals under discussion were the formation of a riverside walk at Chiswick, the preservation of St. Peter's Square, Hammersmith, and of an estate at Upper Clapton, and the scheme of Mr. E. N. Buxton for the acquisition of some 300 acres formerly part of Lamborne and Hainault Forests at a cost of £27,000.

## Cheap Fruit.

Street hawkers in London have been selling Cherries and Strawberries at 2d. and 3d. per pound respectively, and Bananas at four a penny. Mangoes are on show in Covent Garden.



# THE BEE-KEEPER.

## Comb Honey.

There is nothing of a correspondence character in apiculture to equal the unblemished purity of the finest specimens of comb honey; this, together with the fact that during the last few years many improved methods and appliances have been invented for increasing its production has caused a corresponding increase in its consumption, until it is now a staple article of diet. Previously this alimentary treasure realised such prohibitive prices that it was a luxury enjoyed only by a privileged few. It is very difficult to obtain a large quantity from one hive as the liability to swarm is increased. The aptitude of the bee-keeper may therefore be estimated by his success in producing it consistently good, as unless it is properly finished it is of very little value. The greatest trouble in this respect is caused by giving too many sections. It requires considerable judgment and an accurate knowledge of the honey sources to give the requisite quantity.

Those who decide to work for sections will find the following suggestions serviceable:—Use full sheets of the thinnest worker base foundation obtainable and dividers between each row. The use of full sheets will induce the bees to enter and commence work more readily, which reduces the inclination to swarm and is of immense importance in the production of large quantities. It is necessary that queen excluder be used between the brood chambers and the supers. If fitted with a narrow frame of wood about half an inch thick all round and a piece across the centre it will be an improvement. This must be put on with the wood next to the frame, as in this position it provides a passage for the bees under the excluder, and consequently they have access through more perforations, and the hive will produce more surplus than when placed on flat.

No discriminating apiarist, I think, can fail to recognise that it requires a powerful colony to produce honey in quantity; therefore as soon as the hive is full of bees and brood, and the first signs of the honey flow are noticeable, viz., bees falling heavily on the alighting board, and the top cells of the brood-combs being lengthened, put on a crate of sections, and the workers will soon take possession and will fill them with beautiful comb. Add more supers as long as the season promises to hold out. Caution should be used in giving supers at first, not giving too much space, but gradually extending a little in advance of the bees rather than too late. It should be remembered that the bees also require a little extra room for ripening newly gathered nectar.

When the season is on the wane the super area should be diminished, and any partly-filled sections given to the most powerful colonies to complete. The season will then close with the minimum of unfinished sections, and the excellence of some is quite surprising. The bees will probably cluster outside after cramping, but no more room should be given. There is no danger of swarming. When adding racks of sections, if there is a probability of a continuance of the harvest raise the filled super to place the empty one underneath it. The duration of the honey flow must be correctly estimated, or, if it is checked, you will find the unexpected has happened—namely, the bees have carried the honey down below and retreated.

The question is sometimes raised. Why is there such a difficulty in inducing bees to enter racks of sections, and why have they at times such an antipathy for queen excluder? It is well known that bees work best where there is a large body of them engaged in a similar operation. For this reason they work better in frames than in sections. Heat is the secret, and this is not obtainable unless there is a large number of bees. If there is any difficulty in getting them to commence work advantage may be taken of this fact, and extracting combs given, and when once the working fever is created they will seldom afterwards swarm if sufficient room is given to keep them fully employed. The combs should be given first and the sections afterwards. It must, of course, be understood that it is absolutely necessary to have the brood-nest full and the supers wrapped up with some non-conducting material to keep them warm, which will encourage comb-building in the night. Bees cannot work properly unless they can raise and maintain a temperature of least 90deg, and this is impossible if the bee-keeper is negligent.

Bees may be coaxed into sections by various methods. Take a section from a colony where the bees are working in them, and place it with the adhering bees in the centre of the crate over the stock where they refuse to enter, and they will commence work immediately. This plan is always successful. Of course, these hints are given on the supposition that the bees are strong enough, and honey coming in, but still refuse to enter the sections. To have the sections in the best condition remove them as completed. The cappings are then very white and inviting. If left too long on the hive, they become darkened by

the constant stream of traffic, and their appearance injured. Before removing a rack of sections, draw a piece of fine wire between the rack and the top of the hive, to sever all connection. Should a comb become fractured and bleed, prop the super up slightly for a few moments, and the bees will clear the honey away. Robbers must be carefully excluded. After removal, carefully scrape them perfectly free from propolis, without cutting the wood, and grade them. Propolis is best removed by a glazier's knife. When clean, wrap in paper and tie neatly with string, marking each crate so that it may be easily ascertained where the different qualities lie without unpacking. It is not advisable to glaze them until wanted for sale; they will then look fresh and clean.

Comb honey producers are aware that there are always cells next to the side of the section partly filled with unsealed honey which, if the section is turned sideways, will run out and mar its appearance. The remedy for this is to store in a dry, warm place, 85deg to 90deg. Bees evaporate the moisture from honey by heat, and therefore we must obtain this artificially if we expect to keep it in good condition. Comb honey kept at this temperature gradually thickens, and improves in condition and appearance, instead of having the watery appearance usually found where it is kept in a damp, cool place. A cupboard near the kitchen fire is an admirable place during the winter months. It may be kept from one season to another in first-class condition.—E. E., Sandbach.



## Hardy Fruit Garden.

**PROPAGATING STRAWBERRIES.**—There are several methods of rooting runners, namely, in small pots filled with good soil or squares of turf, and pegged on small mounds of soil or prepared spaces between the rows. The method most convenient to the cultivator must be adopted, all requiring a certain amount of attention in order to carry out the rooting properly. If pots are employed, those 3 inches in diameter are the best. Drain them in a piece of thick turf, grass side downwards, and fill up the pot with a mixture of loam and rotted manure made firm. Select runners just emitting roots, and which are of a sturdy character, securing them on the pots with a peg or stone; keep thoroughly moist until established, when it is necessary to remove the pots to a hard base. Rooting on turves is similar. Cubes of thick turf about 3 inches square are the best. Place them grass side downwards after thoroughly soaking them with moisture, and secure the runners upon them, preferably with a hooked peg. Water should be given on every dry day. Runners will of themselves root into the soil between the rows, but if left alone there is usually too rank growth. Therefore clear out a large proportion so as to leave ample space for the selected runners. Should the ground be rough and unkindly, a little prepared material may with disadvantage be placed on mounds on to which the runners may be secured. A few spaces might with convenience be set apart for runners, but the rows must be fruitful, so that the runners are of a desirable kind. So long as crowding is not permitted very good plants may be obtained for general planting, but to obtain well-rooted plants early, which are readily removed and preserved until wanted for forming new beds, the pot system is the best.

**GOOSEBERRIES AND CURRANTS.**—The full flavour of the fruit is best secured by abundance of light and air, and to obtain this it is necessary to shorten the summer growths. The advantages of doing this are not only gained by the fruit, but the spurs bearing the fruit buds for the succeeding year are benefited thereby, inasmuch as the vigour and force which would otherwise be wasted in extending growth are concentrated in strengthening and improving the buds. Red and White Currants and cordon Gooseberries are referred to in the above hints. Bush Gooseberries as a rule do not need the shortening system in summer as required by spur pruning. The shoots pruned now may be shortened to about six leaves. Any growths apparently superfluous or unsuitably placed may be entirely cut out. Gooseberries have been freely thinned and the fruit used in a green state, the remainder can be allowed to ripen, helping the berries to swell to a good size by a liberal mulching over the roots. Currants, when ripe, may be netted over to preserve the fruit from birds.

**OUTDOOR VINES.**—Thin out and regulate the wood, stopping in the first place one joint beyond the bunch, and each

succeeding growth to one leaf as made. In addition to this treatment, it is desirable to lay in some young rods either to fill vacant places, or to take the room now occupied with old wood which probably needs removal. Vines are always benefited by an occasional refurnishing with young rods. The bunches must be thinned out to not more than one on a shoot, the berries also in each bunch being carefully and regularly thinned. Afford adequate supplies of moisture to the roots, this being an important matter in maintaining health, vigour and steady progress. With moisture thus present in the soil additional help can be given to aid the swelling of the berries, liquid manure proving most sustaining. To check rapid evaporation during dry, hot periods, a mulching of manure placed over the roots will prove beneficial. Copious waterings can also be given, over this with advantage.

**STONE FRUITS.**—If plenty of attention can be given to Plums, Cherries, Apricots, Peaches and Nectarines in laying in the summer growths so as not to be crowded, the fruits thinned to a number which the trees can properly carry without undue strain, the soil kept moist and the root fibres numerous and active, it is almost certain the fruit will swell to a fair size, be of good quality and ripen well. At the same time the wood for the succeeding year will gradually strengthen and ripen off. A little bonemeal or potassic and phosphatic manure mixed with good loam and applied as a top-dressing will be of great service to the majority of stone fruits, especially to those where the active state of the fibrous roots renders the trees in a fit condition to take advantage of the assistance.

**OUTDOOR FIGS.**—The young wood of Fig trees should be laid in in quantity sufficient to fill the vacant places, and no more. It is positively ruinous to crowd the growths, nor should they be shortened, but laid in at full length. The superfluous shoots cut out entirely. Abundance of fibrous roots near the surface will require a heavy mulching of manure. Occasional copious supplies of water will also be necessary in dry weather.—**EAST KENT.**

### Fruit Forcing.

**CHERRY HOUSE.**—After the fruit is gathered the chief object is to secure the plumping or perfect formation of the buds by keeping the foliage clear of every description of insect pest, syringing abundantly, and if necessary applying an insecticide. Red spider is the most troublesome, and must be suppressed, as it otherwise destroys the foliage; paraffin, softsoap, 8oz to 4 gallons of water, with loz of potassium sulphide added, is very effective against that and other pests, including parasitic fungi. Although less moisture is needed than when the fruit is swelling, yet there should be sufficient moisture at the roots to maintain the tree in a healthy condition. Trees in pots from which the fruits are gathered may be placed outdoors in the full sun, plunging the pots in ashes. Water as required to keep the soil moist, and syringe in the evening of hot days, paying particular attention to keeping the foliage free from pests.

**VINES.—IN POTS FOR EARLY FORCING.**—Cut-back Vines that were started early will have completed their growth and have the energies concentrated on the perfecting of the buds and the storing of essential matter for the support of the next season's growth in the early stages. The supplies of water, however, should be lessened, discontinuing syringing, or only having recourse to it occasionally, and moderating the supplies of liquid nutriment or water at the roots. Admit air freely, and afford all the light practicable to the principal foliage. If the canes do not ripen well keep through the day at 85deg to 95deg by moderating the ventilation and admit air freely at night.

**EARLY HOUSES.**—When the Grapes are cut the Vines should be well syringed to free them from such accumulations as dust and the invading hosts of such pests as red spider and thrips. If scale or mealy bug has obtained a footing, some approved insecticide should be used against them, or the Vines may be syringed with a mixture of paraffin oil and water, using a wineglassful to 4 gallons of water, one person syringing into the vessel so as to keep the oil well mixed with water whilst another individual applies it evenly to the Vines, it being important that they and every part of the house be well, but not excessively, wetted, for without that the eradication of the pests will only be partial. The application should be repeated two or three times at intervals of about four days, the free oil being far more effective than when emulsified, though not a safe application on young foliage, but quite innocuous to the Vines after the fruit is cut. Keep the borders sufficiently moist to preserve the foliage in good condition, it being better to mulch them lightly with partially decayed manure than to supply heavy waterings at frequent intervals to keep the soil from cracking. Allow a little extension of the laterals, as this tends to keep the roots active, and to preserve the principal leaves in health, or if these fall, prevents the starting of their corresponding buds.

**LATE HOUSES.**—Late Grapes, intended to hang or keep all the winter, should have a final thinning, removing the smallest berries, and where too crowded allow every berry full space for

development. Late Grapes should be more severely thinned than early and midseason ones, yet leaving sufficient berries to form symmetrical bunches, such as will retain their form when dished, and have a good appearance. Inside borders should be kept well supplied with water, afterwards following with liquid manure or a top-dressing of some approved artificial manure, and work in moderately. A light mulching of partially decayed lumpy manure, sweetened horse droppings being most suitable for heavy soil, and cow manure for light, poorer soils, would lessen the necessity for watering, and would attract the roots to the surface, and nourish them. Likewise outside borders must have attention for watering, feeding, and mulching as circumstances require. Regulate the young growths as needed, adopting the extension rather than the restrictive system where there is room for it without crowding, keeping all gross laterals stopped, so as to cause an equal flow of the sap throughout the Vines. As the period of scalding has arrived, though most common when the berries have completed stoning and begin changing for ripening, then taking the final swelling, it will be necessary to guard against it by increased night temperature, or 65deg to 70deg, and abundant ventilation, so as to reduce the atmospheric moisture or prevent the air heating more rapidly from sun heat than the berries. After the berries are advanced in colouring danger from scalding is past, then the fire heat may be economised by reducing the ventilation early, so that the sun may raise the temperature on fine afternoons to 90deg or 95deg.

**YOUNG VINES.**—The canes of this season's planting should, provided the light is not too much obstructed, be allowed to grow unchecked, it being presumed they are to be cut back to the bottom of the trellis, or to three buds for growth another year at the winter pruning, but the laterals must not be allowed to interfere with the leaves that feed the buds at their bases and expected to fruit next season. Supernumeraries, on the other hand, intended for next year's fruiting, may be regularly stopped at a length of 7ft or 8ft, pinching the laterals to one leaf as made, except those from the uppermost part of canes, which at the first stopping should be allowed a little more latitude. When growth is completed the laterals ought to be gradually removed, taking care not to start the main buds, so as to induce the thorough ripening of the wood. Afford water liberally, mulching and keeping the surface moist, so as to encourage surface roots. Maintain a moist atmosphere by frequent sprinkling of available surfaces, and syringe the Vines on fine afternoons, closing early to attain a heat of 90deg to 95deg. Ventilate freely through the early part of the day to ensure a short-jointed, thoroughly solidified growth.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.          | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil. At 9 A.M. |           |                |                | Lowest Temperature on Grass. |
|----------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|------------------------------------|-----------|----------------|----------------|------------------------------|
|                |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                     |           | At 2-ft. deep. | At 4-ft. deep. |                              |
|                |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                    |           |                |                |                              |
| 1902.          |                    |                         |           |           |           |             |                                    |           |                |                |                              |
| June and July. |                    |                         |           |           |           |             |                                    |           |                |                |                              |
| Sunday ...29   | S.E.               | deg. 76.8               | deg. 66.9 | deg. 79.8 | deg. 61.0 | Ins. 0.02   | deg. 64.3                          | deg. 60.2 | deg. 55.5      | deg. 46.3      |                              |
| Monday ...30   | S.E.               | 71.2                    | 62.5      | 80.2      | 51.5      | 0.29        | 64.2                               | 60.4      | 55.7           | 40.7           |                              |
| Tuesday ...1   | S.                 | 59.4                    | 58.0      | 71.7      | 56.8      | 0.44        | 64.0                               | 60.8      | 55.9           | 46.3           |                              |
| Wed'sday 2     | N.E.               | 55.0                    | 50.0      | 62.2      | 48.8      | —           | 62.2                               | 60.5      | 56.2           | 41.9           |                              |
| Thursday 3     | N.W.               | 61.6                    | 54.9      | 66.3      | 43.3      | —           | 60.0                               | 60.0      | 55.3           | 34.5           |                              |
| Friday ...4    | W.S.W.             | 62.5                    | 56.0      | 77.0      | 46.8      | —           | 60.0                               | 59.6      | 56.3           | 38.5           |                              |
| Saturday 5     | W.N.W.             | 65.9                    | 61.8      | 78.2      | 49.0      | —           | 62.5                               | 59.6      | 56.8           | 48.5           |                              |
| MEANS ...      |                    | 64.6                    | 58.6      | 73.6      | 51.0      | Total. 0.75 | 62.5                               | 60.2      | 56.1           | 42.4           |                              |

There were thunder-storms at the beginning of the week, since which time the weather has been warm and bright.

### Trade Notes.

The Corporation of Stockport have just accepted the design and estimate of Messrs. Messenger and Co., Limited, horticultural builders, Loughborough and London, for a large range of glass houses at Vernon Park.

The sale of the freehold estate known as The Hale Farm Nurseries, Hanworth, Middlesex, and of Crook Lodge, Crook Log, Bexley Heath, and two acres of land adjacent, utilised for Begonia culture, is announced, and will take place at The Mart, Tokenhouse Yard, E.C., on the 28th of July, at 2 p.m. For conditions of the sale apply at 67 and 68, Cheapside, London. E.C.



## TO CORRESPONDENTS

\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

### Plan of a Bothy—Competition.

In answer to a query from "A. B.," and in order to keep this before the minds of readers, we print below the rules for the Journal Bothy Plan Competition. It will be remembered that "Well-wisher" promises a first prize of £3, and the Editor supplies a second prize of £1.

The rules of the competition are as follows:—The plan, drawn to scale, must not exceed 7in broad by 7in deep, and must be clearly defined on stout paper. The plan must provide suitable accommodation for six men, and the cost of the building ought not to exceed £200 to £220. A statement of the general items of cost should accompany the plans, together with any written comments thereon. The competition is open until Christmas, 1902, by which date all plans must be in the hands of the Editor. The sender's name and full address should be enclosed when sending the plan, and the sender will alone be held responsible for it.

**DOUBLE IRIS (F. A.).**—Purely a case of excessive vigour, and synchronous with fasciation in the Liliaceae. We have doubts as to whether it is "fixed," and at any rate it is ugly. Try the effects of planting and growing it in poor soil.

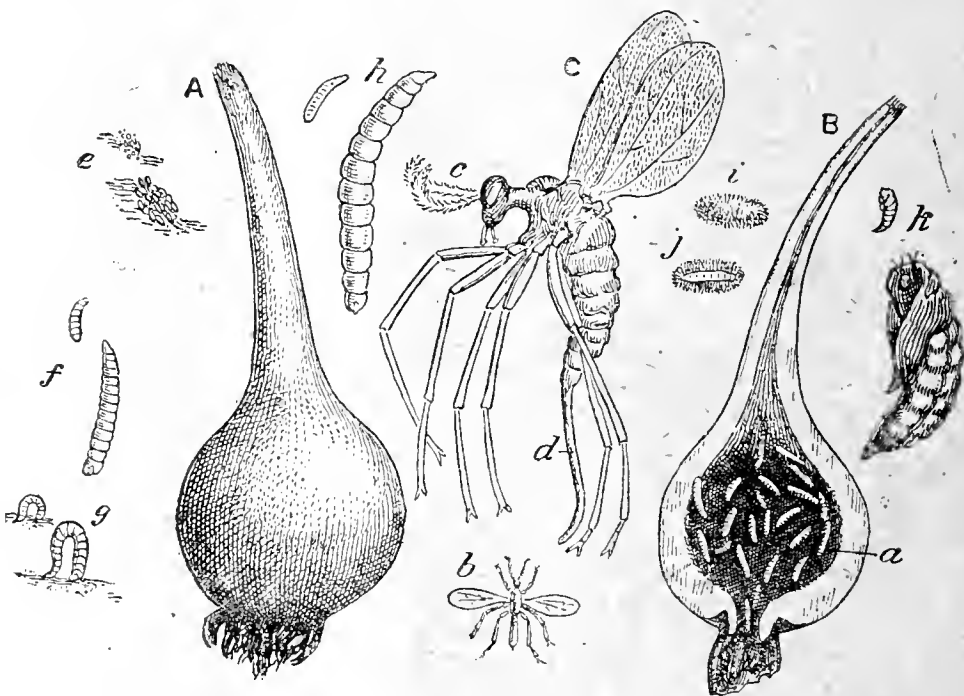
**MULBERRY SHOOT BEARING CATKINS (D. W.).**—The circumstances of the "falling-away of the male catkins" may have led our correspondent into error, for certainly the common Mulberry is monoecious as the shoots you send so well show, and our passing the statement was an unfortunate oversight. Of course the staminate flowers are purposeless after the pollination has occurred, whereas the female flowers give rise to fruit.

**ARTIFICIAL MANURE FOR VINES (J. Q.).**—In our issue of July 3 your queries were replied to, your letter having gone astray in consequence of its being addressed "The Editor" only instead of "The Editor of the *Journal of Horticulture*," other publications being issued from 12, Mitre Court Chambers. Clay's fertiliser, about which you inquire, is a good all-round artificial manure, and would help the Vines to finish their crops as well as assist them to store matter for the succeeding one. The query about weed-killer was also answered July 3, to "Idem," page 20. The weed-killers you mention are effective for their purpose, but we cannot undertake, for obvious reasons, to refer to any proprietary article in particular, unless under special circumstances.

**GROWING DAHLIAS FOR EXHIBITION (Young Beginner).**—Both Fancy and Show Dahlias require a rich, moderately heavy soil to give the best results, and should be stirred deeply and liberally manured. It is not, however, advisable to apply strong manure in spring, or over-luxuriance in foliage would thereby be encouraged at the expense of the production of flowers. A light, open situation, free from the shade of trees, is best, but surrounding shrubs or dwarf trees are often an advantage to Dahlias by protecting them from high winds. Planting should not be attempted before the beginning of June in most localities, and the plants should be stout, clean, and healthy, with one stem. A distance of 6ft should be allowed from plant to plant; water after planting, and apply a temporary stake to each for a time; afterwards place a stout stake to each plant and secure the main stem to it. When the heads commence forming reduce the growths to about four of the most promising, and securely affix these to the main stake by tying, or preferably secure each to a stake separately, for bundling will not do, as the foliage must have full exposure to light. On the shoots thus obtained there will appear flowers in due course. These must be thinned while quite young, leaving the central one on each shoot and removing the side buds. When these reserved buds are beginning to develop into flower they must be shaded from sun, and protected from rain, and in due course you will have good or bad blooms, according to the management. This we cannot describe—it is an art that must be learned, but we may say that Dahlias are much benefited by frequent applications of water during the summer, and by liquid manure after the buds are formed, the ground being kept mulched with short manure. The plants must be kept free from insect pests, especially earwigs, or they will spoil the foliage and also the blooms.

**PELARGONIUM SPORT (C. S.).**—We do not understand your letter. Is it that you do not know which is the variety Princess Alexandra and which the sport? We do not know the variety, as Pelargoniums are florists' flowers, which we do not attempt to keep up with. Send to Messrs. Cannell and Sons, Swanley. The flowers fall easily to pieces.

**GRUB-EATEN FRUITS OF MARIE LOUISE PEAR (North Riding).**—The Pears are infested by the larvæ or maggots of the Pear-gall gnat or Pear midge, *Diplosis pyrivora*, a small two-winged fly, which appears early in spring, commonly before the flowers of the Pear trees open, and remains about ten days. After pairing the female deposits her eggs inside the blossom envelope, when the Pear flower has opened sufficiently for the insertion of her long ovipositor. The eggs are placed at the base of the blossom and sometimes in the neck of the ovary, and in three or four days the eggs hatch into tiny maggots in the ovary of the embryo fruit, where they feed upon the growing tissues, and in consequence give rise to a gall. The effect is to destroy the core and ovules, and the maggots continue until full-fed, which occurs early in June in forward seasons, when decay follows, and the fruit either falls or cracks, and the maggots emerge, dropping to the ground. The maggots enter the soil an inch or two, and after resting awhile, make oval cocoons of silken threads, mixed with particles of earth. In these cocoons they remain apparently unchanged until the following spring, then change to pupæ, and after a month in that state the flies emerge, always by the time the Pear blossoms are in good colour, and have nothing to do but



**Pear Fruits Eaten by Grubs.**

await the expansion of the petals for inserting the eggs. These are seldom less than a dozen, and often many more in number, which means a corresponding number of maggots, so that there is no wonder they make such speedy work of the Pear. The preventive measures recommended are:—1. Catching the flies on strips of tin about 1ft long and 3in wide, smeared on both sides with a substance formed of one part sweet oil and two parts resin melted together, affixing the traps in the forks of the trees, or so that they will be level with or just above or outside the blossoms. The traps must be in position just before the flowers unfold, continuing for a fortnight. 2. Spray the trees with some "fine" smelling substance, such as tar water,  $\frac{1}{2}$ lb of gas tar being boiled for half an hour, or until it will readily mix with water, in two gallons of water, and then dilute to 50 gallons with water, applying just before the flowers open. 3. While the maggots are in the fruit, the removal of the affected Pears and burning them never fails. 4. When the larvæ have left the fruit, which takes place about the middle of June, later in backward seasons and in the open, but earlier against walls, supply a dressing of kainit, 10cwt. per acre, 7lb per rod, or 4oz (rather less) per square yard just after rain. The salt will be dissolved by the soil moisture, and the solution coming into contact with larvæ destroys them. In the case of cultivated land the kainit may be lightly pointed in. The most hateful thing to pests is good cultural methods that make for their disturbance and eradication. But when the garden or orchard so treated adjoins another garden or orchard that knows neither soil cultivation nor essential top management, all the labour will be in vain, as the Pear-gall gnats are bound to find their way from the neglected to the cultivated trees. In the *Journal of Horticulture*, June 3, 1897, page 486, is an article by Mr. G. Abbey on this pest, and on page 487 of the same number are illustrations showing the life history of the Pear-gall midge.

**MEALY BUG IN VINERY (H. H.).**—The best means of getting rid of mealy bug in a vinery where the Grapes are just stoning is by vaporisation with nicotine compound, repeating two or three times at intervals of about four days. It must be borne in mind, however, that the vaporisation will injure the foliage of Lady Downe's and Muscat of Alexandria, and should not be practised in vineries where these varieties of Grapes are grown. The only other safe method to follow with the Grapes swelling or ripening is to go over the Vines and touch each mealy bug or seat thereof with methylated spirit, just a tiny drop sufficing to destroy the pest, and as a rule it does not injure the Vines. To eradicate the mealy we have found syringing with a mixture of paraffin oil and water, a wineglassful to four gallons of water, one person syringing into the vessel and another applying it to the Vines, thoroughly wetting every part of them and the house, answer well. This can only be done after the Grapes are cut, and should be repeated two or three times at intervals of a week.

**GRAPE STEMS AFFECTED (J. R. P.).**—The stems are shanked and the berries are scalded. The shanking appears very decisive, and is usually caused by the roots of the Vines being in soil much too close, rich, and wet, for which the best remedy is lifting the Vines and laying the roots in fresh and more open material nearer the surface. Sometimes, however, a dressing of lime, preferably air-slaked, and applied to the surface at the rate of 2lb per square yard, either lightly pointed in or left on the surface if not objected to, effects wonders, for some of the lime is constantly being dissolved, and passes into the soil with rain water or that applied in watering, and corrects the soil's sourness, while rendering other substances more readily available as food. Indeed, we have known a 2in thickness of lime in a Vine border restore Vines to health, the roots coming up into the soil just beneath and even into the lime. For the scalding there is no remedy, but it may be avoided by ventilating freely, leaving a little air on constantly, and increasing the ventilation early in the morning, so that the berries may heat evenly with the surrounding air, moisture not then condensing on them, and being heated by the sun or surrounding air, scalded. Also keep a gentle warmth in the hot water pipes.

**NAMES OF PLANTS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (H. K.).—1. *Prunus Padus*, the Bird Cherry; 2. *Cotoneaster acuminata*. (W. W., Roxburgh).—*Paneratium illyricum*. (T. H.).—*Acridocarpus natalitius*. (J. B.).—1. *Sedum anglicum*; 2. *Sedum aere*; 3. *Fuchsia macrostema*; 4. *Allium roseum*; 5. *Spiraea decumbens*; 6. *Lactuca perennis*. (F. Mallis).—1. *Campanula garganica hirsuta*; 2. *C. carpathica turbinata*; 3. *C. pulla*; 4. *C. glomerata*; 5. *Spiraea lancifolia*, syn. *Haequetia*. (L. F.).—*Anemone rivularis*. (T.).—1. probably the "Garden" Rose, *Annie of Gierstein*; but send to a grower. (N. B., Hamilton).—1. *Phlox ovata*; 2. *Spartium junceum*; 3. *Genista dalmatica*; 4. *Solanum Wendlandi*; 5. *Trachelium caeruleum*; 6. *Torenia Fournieri*.

**Special Note.**—When sending newspapers containing paragraphs intended for the notice of the Editor, it would very greatly gratify him, and save time, which the Editor feels precious to him, were the paragraphs distinctly marked.

## Covent Garden Market.—July 9th.

### Average Wholesale Prices.—Fruit.

|                         | s. d. | s. d.   |      | s. d.                  | s. d.        |
|-------------------------|-------|---------|------|------------------------|--------------|
| Apples, Tasmanian ...   | 11    | 0 to 15 | 0    | Lemons, Messina, case  | 12 0 to 20 0 |
| Apricots, sieves ... .. | 8     | 0       | 10 0 | „ Naples „             | 30 0 40 0    |
| Bananas ... ..          | 8     | 0       | 12 0 | Oranges, case ... ..   | 25 0 30 0    |
| Cherries, English,      |       |         |      | Pines, St. Michael's,  |              |
| ½-sieves ... ..         | 8     | 0       | 12 0 | each ... ..            | 2 6 5 0      |
| Grapes, Hamburgh, lb.   | 1     | 6       | 2 0  | Strawberries, special, |              |
| „ Muscat ... ..         | 2     | 6       | 6 0  | doz 1-lb punnets       | 8 0 12 0     |
|                         |       |         |      | „ pecks ... ..         | 2 0 3 0      |

### Average Wholesale Prices.—Vegetables.

|                         | s. | d. | s. | d. |   | s.                           | d. | s. | d. |    |   |
|-------------------------|----|----|----|----|---|------------------------------|----|----|----|----|---|
| Artichokes, green, doz. | 2  | 0  | to | 3  | 0 | Lettuce, Cabbage, doz.       | 0  | 6  | to | 0  | 0 |
| „ Jerusalem, sieve      | 1  | 6  |    | 0  | 0 | „ Cos, doz. ...              | 1  | 0  |    | 1  | 6 |
| Batavia, doz. ... ..    | 2  | 0  |    | 0  | 0 | Mint, doz. bun. ...          | 4  | 0  |    | 0  | 0 |
| Beans, French, lb. ...  | 0  | 7  |    | 0  | 9 | Mushrooms, forced, lb.       | 0  | 8  |    | 0  | 9 |
| „ broad ... ..          | 3  | 0  |    | 4  | 0 | Mustard & Cress, pnnt.       | 0  | 2  |    | 0  | 0 |
| Beet, red, doz. ... ..  | 0  | 6  |    | 0  | 0 | Parsley, doz. bnchs. ...     | 3  | 0  |    | 0  | 0 |
| Cabbages, tally ... ..  | 5  | 0  |    | 0  | 0 | Peas, white, bushel ...      | 3  | 0  |    | 0  | 0 |
| Carrots, new, bun. ...  | 0  | 6  |    | 0  | 8 | „ blue „ ... ..              | 4  | 0  |    | 5  | 0 |
| Cauliflowers, doz. ...  | 3  | 0  |    | 0  | 0 | Potatoes, English, new, cwt. | 12 | 0  |    | 15 | 0 |
| Corn Salad, strike ...  | 1  | 0  |    | 1  | 3 | „ Jersey, new, cwt.          | 8  | 0  |    | 9  | 0 |
| Cucumbers doz. ... ..   | 2  | 6  |    | 4  | 0 | Radishes, doz. ... ..        | 0  | 9  |    | 0  | 0 |
| Endive, doz. ... ..     | 1  | 6  |    | 0  | 0 | Spinach, bush. ... ..        | 3  | 0  |    | 4  | 0 |
| Herbs, bunch ... ..     | 0  | 2  |    | 0  | 0 | Tomatoes, English, lb.       | 0  | 4  |    | 0  | 6 |
| Horseradish, bunch ...  | 2  | 6  |    | 0  | 0 | Turnips, bnch. ... ..        | 0  | 6  |    | 0  | 8 |
| Leeks, bunch ... ..     | 0  | 1½ |    | 0  | 2 |                              |    |    |    |    |   |

### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                           | s. d. | s. d.   |      | s. d.                      | s. d.        |
|---------------------------|-------|---------|------|----------------------------|--------------|
| Aralias, doz. ... ..      | 5     | 0 to 12 | 0    | Geraniums, dble., doz.     | 4 0 to 6 0   |
| Araucaria, doz. ... ..    | 12    | 0       | 30 0 | Grevilleas, 48's, doz. ... | 5 0    0 0   |
| Aspidistra, doz. ... ..   | 18    | 0       | 36 0 | Heliotropes ... ..         | 6 0    8 0   |
| Crotons, doz. ... ..      | 18    | 0       | 30 0 | Hydrangea, pink... ..      | 10 0    12 0 |
| Cyperus alternifolius     |       |         |      | Lycopodiums, doz. ...      | 3 0    0 0   |
| doz. ... ..               | 4     | 0       | 5 0  | Marguerite Daisy, doz.     | 8 0    0 0   |
| Dracæna, var., doz. ...   | 12    | 0       | 30 0 | Mignonette ... ..          | 6 0    0 0   |
| „ viridis, doz..          | 9     | 0       | 18 0 | Myrtles, doz. ... ..       | 6 0    9 6   |
| Ferns, var., doz. ... ..  | 4     | 0       | 18 0 | Palms, in var., doz. ...   | 15 0    30 0 |
| „ small, 100... ..        | 10    | 0       | 16 0 | „ specimens ... ..         | 21 0    63 0 |
| Ficus elastica, doz. ...  | 9     | 0       | 12 0 | Pandanus Veitchi, 48's,    |              |
| Foliage plants, var, each | 1     | 0       | 5 0  | doz. ... ..                | 24 0    30 0 |
| Fuchsias ... ..           | 4     | 0       | 6 0  | Shrubs, in pots ... ..     | 4 0    6 0   |

### Average Wholesale Prices.—Cut Flowers

|                           | s. d. | s. d.  |      | s. d.                    | s. d.      |
|---------------------------|-------|--------|------|--------------------------|------------|
| Arums, doz. ... ..        | 3     | 0 to 0 | 0    | Lilium longiflorum ...   | 3 0 to 4 0 |
| Asparagus, Fern, bnch.    | 1     | 0      | 2 0  | Lily of Valley, 12 bnchs | 12 0 18 0  |
| Bouvardia, coloured,      |       |        |      | Maidenhair Fern, doz.    |            |
| doz. bunches ... ..       | 6     | 0      | 8 0  | bnchs. ... ..            | 4 0 0 0    |
| Carnations, 12 blooms     | 1     | 0      | 0 0  | Marguerites, white,      |            |
| Cattleyas, doz. ... ..    | 8     | 0      | 12 0 | doz. bnchs. ... ..       | 4 0 0 0    |
| Cornflower, doz. bun.     | 1     | 0      | 1 6  | „ yellow, doz. bnchs.    | 2 0 0 0    |
| Croton foliage, bun. ...  | 0     | 9      | 1 0  | Myrtle, English, per     |            |
| Cycas leaves, each ...    | 0     | 9      | 1 6  | bunch ... ..             | 0 6 0 0    |
| Cypripediums, doz. ...    | 2     | 0      | 3 0  | Odontoglossums ... ..    | 4 0 0 0    |
| Eucharis, doz. ... ..     | 0     | 0      | 3 0  | Orange blossom, bunch    | 2 0 0 0    |
| Gardenias, doz. ... ..    | 2     | 0      | 2 6  | Roses, Niphetos, white,  |            |
| Geranium, scarlet, doz.   |       |        |      | doz. ... ..              | 1 0 2 0    |
| bnchs. ... ..             | 4     | 0      | 0 0  | „ pink, doz. ... ..      | 2 0 0 0    |
| Gladiolus, white, doz.    |       |        |      | „ yellow, doz. (Perles)  | 1 0 2 0    |
| bunches ... ..            | 6     | 0      | 8 0  | „ Generals... ..         | 0 5 0 6    |
| Gypsophila, doz. bun.     | 3     | 0      | 0 0  | Smilax, bunch ... ..     | 4 0 6 0    |
| Iris, Spanish, doz. bun.  | 2     | 0      | 0 0  | Stephanotis, doz. pips   | 2 0 0 0    |
| Ivy leaves, doz. bun. ... | 1     | 6      | 0 0  | Stock, double, white,    |            |
| Lilae, French, white,     |       |        |      | doz. bun. ... ..         | 2 0 2 6    |
| bunch ... ..              | 3     | 6      | 0 0  | Sweet Peas, white and    |            |
| Lilium Harrisii ... ..    | 2     | 0      | 3 0  | coloured, dozen bun.     | 1 0 2 0    |
| „ lancifolium alb.        | 2     | 0      | 0 0  | Tuberoses, dozen... ..   | 0 3 0 4    |
| „ l. rubrum... ..         | 2     | 0      | 2 6  |                          |            |



## The Sole Topic of the Hour.

We may be pardoned if we digress for a moment. Even the weather hardly interests us now. We do not go to the local post office to read the weather forecasts. We go to read how the fight is progressing between two great powers, the King of Terrors and the ruler of this vast Empire. Our hearts have been touched as they have never before been touched for the last century, nay, we may say for longer than that. We had come within a few hours of the great day, the day that was to see our monarch crowned, when, without practically the slightest warning, fear and trembling fell on each heart, and we stood still to wait and see what God would do. No one, we firmly believe, can put into words the awful sensation that came over the nation when the terrible news was flashed forth throughout the English speaking world. The case was without parallel. The King—our King—in grave danger! Our first thought was for him; our second for that Gracious Lady whose heart was being wrung with agonising sorrow. As we write we know full well that under the most favourable conditions recovery must be long and tedious; but we cannot but hope that in answer to the fervent petition of the nation the Almighty will hear the prayer, "God save the King!"

As we have noted before, Edward VII. really may lay claim to being the King of Agriculturists, as well as the Empire's Monarch. Four times has he been President of the Royal Show, and many are its exhibitions he has attended, not because he knew that his presence did so much to add to the gate receipts, but from a pure love of things agricultural. We may venture to say that the King has passed no happier days than those at Sandringham among his pedigree stock. He did not confine himself to one branch. Of course,



horses came first, and although we should omit his racing stud, we may fairly mention the Shires and Hackneys. At every great sale may be seen representatives from Sandringham on the look out for anything of special merit, and as a consequence the stock on the Home Farm was kept up well to the mark. Shorthorns were made a speciality, and when, as King, the Windsor farm became his, his sphere of agricultural usefulness was largely increased. Prince George appears to be following in his father's footsteps, and we can but hope that he will go to Carnsle with a mind entirely at ease respecting the health of his noble father.

What grumblers we are! The excessive rainfall did not suit us, and now this tropical sunshine is equally calling forth censure. The fact is, the ground got so sodden, and then baked hard, that small plants find a difficulty to exist. It is perfectly marvellous where the moisture has gone, but these high winds are in a measure responsible. The country had indeed put on Coronation garments. The summer must be a short one; it began so late. But autumn days may have much in store for us, days of sweet warmth and genial airs.

We often see that excellent paper "The North British Agriculturist," and it is a most unusual thing if there is not in its pages much to edify and amuse. There is, as many readers may know, a National Diploma in Agriculture to be gained by examination. The men who gain this distinction are to be the future teachers, and the report this year says of them that, though their knowledge of the subjects on which they were examined was good, yet, when it came to spelling, grammar, and English composition, they were found to be sadly wanting. Well, if these men can in practice make farming pay, we should care very little whether they could spell or not. The balance on the right side at the end of the year is of more account than English composition. The composition farmers know most of in these latter times has been that which they have made with their creditors. Of course, there is a prejudice in favour of correct spelling, but we should have thought that, as all boys must at least stop at school till they are fourteen, that these little difficulties had been overcome years ago. Where, we think, these diploma gentlemen fall short, is in practical knowledge. We should like to set them on a strong land farm, or blow-away Norfolk sand, and then ask them to make a living as per agricultural handbook. Things work out beautifully on paper, but paper farmers never can compete with the practical man, and the practical man is not made in two or three years. Farming is a life study.

Primrose McConnell, one of our best living authorities on farming, said in a speech only a fortnight ago that when he left college he had all the degrees in agricultural science that could be got, that he had tons of agricultural literature, and that he would willingly sell them all very cheap for all the good they had done him as a practical farmer. We want more practice and less theory. A cookery book is no use to a cook unless she will work out to a successful issue the recipes therein contained, and all the handbooks to the farm are of no use if simply learned off by rote. Any intelligent child can do that. We like to see a man with toil-hardened hands, and boots that might crush clods.

Much wisdom may often be condensed into very few words, and we came upon two instances to-day in our reading. Professor Wrightson, of Downton, summed up under three heads the essentials for successful dairy work. First, cleanliness; second, cleanliness; third, cleanliness. The three essentials for good farming are: first, muck; second, muck; third, more muck. We have heard an old Yorkshire saying: "Muck in, wicks out," wicks being what in most other counties are called "twitch." Clean land in good heart will grow satisfactory crops.

We often hear complaints from old-fashioned dairy folk about the difficulty they have in getting butter; i.e., they churn for hours with no practical result. All sorts of causes are blamed, the weather, the temperature, the cows the churn, and so on. To churn butter satisfactorily there must be air in the churn, and there cannot be sufficient air if the churn be too full of cream. We know exactly how it happens. There is an extra quantity of cream, and the question arises, Shall I divide this, or churn it all at once for the sake of saving time? And the result is a weary business brought to a very unsatisfactory conclusion. A good rule is to only half fill the churn, and ventilate frequently. All

books or directions for dairy work frequently repeat this axiom, but people will not stay to consider the why and the wherefore.

Sometimes the cream gets "sleepy"; that is, it thickens and sticks to the sides of the churn. Add either water or skimmed milk at the temperature of 60deg, and the butter will presently come. Remember the cream does not want so much violence; a steady, even beat and plenty of air. If butter does not come easily in winter, the low temperature of the cream is generally at fault.

### Work on the Home Farm.

A very fine and hot week has been most favourable for those early birds who had anticipated it by cutting down their Clover, and these fortunates are now literally "in clover," having fine piles of well saved fodder in the yards, whilst their more dilatory, or, to be charitable, less fortunate neighbours, are to-day watching a steady downpour upon their recently shaken out swathes. From other aspects than that of haymaking, to-day's rain will be most beneficial; the change from watery to dry conditions had been too sudden, and both cereals and roots would, without rain, have soon been hanging out signals of distress.

The heat has favoured the sowing of the late breadths of Turnips which are now all in the ground, and some of them already up again. All hands have been well employed, the Clover was quickly got, and happily so, for there has been ample employment for all amongst the Turnips with either horse or hand hoes. The Mangold crop, too, is in need of further looking over. The seed grew so well this year, and produced so thick a plant, that there are more doubles than usual. These must be singled down to the best plant. Single roots with a fair amount of room produce much the greatest weight per acre, and everyone tries for the big heap nowadays.

The alternations of heat and moisture have sorely multiplied the labours of the shepherd, who, since clip day, has been enjoying a well-earned easy time. The fly has never been less troublesome in June, but now that the temperature has become more summer-like, it is simply rampageous, and a flock of 200 ewes and their lambs constitute a breeding ground quite large enough to occupy one man's whole time in keeping it clear of maggots. There are many recipes for killing the maggots, but few of any value in preventing other attacks, but finely powdered tobacco dredged on a sore place will prevent the fly striking there again.

The owner of our local set of steam cultivators, informs us that he is full of orders for breaking up seed pastures before harvest; he is now at work on a field to be sown with late Turnips. The farmers who employ him will be themselves employed in hay-making, whilst he is making hay of their twitch. We can almost hear someone say they ought not have any of that noxious weed, but Nature abhors a vacuum, and when there is little Clover it has a way of filling up the spaces with twitch in a miraculous manner.

### Webbs at the Royal Show.

On entering the showyard the first object was the imposing stand of Webb and Sons, of Wordsley, Stourbridge. This firm has been for many years engaged in the improvement of plants by means of cross-breeding and selection at their celebrated Kinver seed farms, and their experiments have been frequently inspected by many agricultural authorities. A prominent exhibit was the new and improved varieties of Wheat, Barley, and Oats, which have been introduced by this firm, and a comparison of the quality and productiveness of these highly selected stocks with that of the old varieties shows the improvement effected by Messrs. Webbs' scientific operations. Noticeable among these were Webbs' New Mont Blanc Wheat, Webbs' New Standard Red Wheat, Webbs' New Hardy Winter Black Oat, and Webbs' New Burton Malting Barley. Plants in growth represented Webbs' Grass and Clover seeds for permanent pasture and alternate husbandry. Recognising the increasing tendency of agriculturists to grow vegetables for market, this firm exhibited a selection of the most suitable kinds to grow for profit. These included Webbs' New Pioneer Pea, Prize-winner Carrot, Exhibition Cos Lettuce, Emperor Cabbage, and Early Mammoth Cauliflower. About twenty plants of the new Tomato, Webbs' Coronation, are also shown, the handsome fruit hanging in great profusion, and commanding universal admiration. In the flower section, Webbs' Excelsior Gloxinias made a grand show, although consisting merely of plants grown for the production of seed. Amongst named varieties were Webbs' Stanley (vivid crimson), Peerless (white), and Purple Queen. Webbs' Gloxinias were awarded the Royal Oxfordshire Horticultural Society's Gold Medal last week. About 120 varieties of Sweet Peas were also shown, including several novelties, grown in Webbs' experimental grounds. Messrs. Webb are probably the largest manufacturers of artificial manures in the kingdom, their special fertilizers having proved so successful in promoting the growth of heavy crops that many thousands of tons are now annually sent to all parts of the kingdom from their works at Saltney, Chester.

# WEBBS' EMPEROR CABBAGE

MAINTAINS ITS PRESTIGE AS

BRITAIN'S GREAT CABBAGE.

Awarded Highest Honours at all the Leading Shows in the Kingdom. The hearts are large, very uniform in shape, exceedingly solid, and of remarkably fine flavour. It is acknowledged to be

*The earliest & best Cabbage in cultivation.*

6d. and 1/- per pkt., 1/6 per oz., post free.

WEBBS', WORDSLEY, STOURBRIDGE.

## Grand New Climbing Rose DOROTHY PERKINS.

The Floral Committee were unanimous in giving this an AWARD OF MERIT when shown by me at the Royal Horticultural Society's Meeting at the Drill Hall, on May 20th.

*See Report in this Paper of May 22nd.*

This beautiful novelty is a hybrid between Rose Wichuriana and Madame Gabriel Luizet; the flowers are produced in large clusters of a lovely shell-pink with white centre. Besides being a good climber, it can be grown as a fine pot plant.

Orders booked now for autumn delivery, which will be executed in strict rotation. Good plants in 48-pots, 3/6 each; extra strong, in 24's, 5/6 each.

Special List of other New Roses on application.

**E. POTTEN,**  
Camden Nurseries, CRANBROOK, KENT

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## Journal of Horticulture.

THURSDAY, JULY 17, 1902.

### Gardening Societies.

**N**APOLEON Bonaparte spoke of "perfidious Albion" as being a "nation of shop-keepers." If he had lived at the beginning of this century, instead of last, he might truthfully have called us a nation of gardeners, and we should have forgiven him. Nothing is more striking in the country's history than its horticultural advances. In a business sense, gardening has grown to be a vast industry comprised of many branches; as a science it has advanced by leaps and bounds, and gardens to-day are enriched, not only with the natural production of other lands, but by forms of flowers, fruits, and vegetables that are the direct result of human skill in hybridising and crossing. And as horticulture has developed, so, also, has the love for it.

As a business, gardening is a strong power in the land; but as a hobby, I think it is still greater. Men and women of all grades of society pursue the gentle art for the sake of the pleasure they derive from it; some amid the pleasant surroundings of country mansions, some on the plots of ground where stand suburban villas, others in the back-yard gardens of towns, and others again in the cottage gardens and allotments of rural villages. The conditions and circumstances under which gardening is pursued differ widely, but in all cases there is the same love for horticulture, and this is the motive power of the whole movement. As a rule, amateur gardeners are the most unselfish of men, and love to share their joys and sorrows with their fellows. In fact, you cannot fully enjoy a garden alone; and what gives greater pleasure than to have a friend of gardening bent drop along for a chat just when you have some favourite plant in bloom,

**R**EADERS are requested to send notices of Gardening appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "**THE EDITOR**" at **12, Mitre Court Chambers, Fleet Street, London, E.C.**, and to no other person and to no other address.



or a particular crop just at its best? Gardeners always talk shop, but they are never aware of it, because to them there is no other topic half so pleasant, neither does it seem possible to take a keen interest in horticultural matters without having some genial spirit to share it with you. Perhaps it is this mutual tendency to be sociable that first led to the formation of horticultural societies about which I have a few words to say.

First of all there is the Royal Horticultural Society with its far-reaching influence, which embraces gardeners of all classes; then there are the societies of provincial centres, such as Shrewsbury, York, and Hanley, that hold magnificent shows every year; and, thirdly, the societies devoted to the welfare of particular flowers, such as the Chrysanthemum, the Rose, and the Dahlia. We know all about these institutions, gardening papers tell of their doings week by week; but there are hundreds of other societies scattered over the land that make no bid to fame, beyond an occasional paragraph in the local newspaper, and yet it is impossible to over-estimate the amount of good they are doing in the world of horticulture. The village society holding its annual show is, comparatively speaking, an old institution; but in the suburbs of every town of size the gardening spirit moves, and of recent years societies have sprung up, at the meetings of which knowledge is distributed, and the productions of the members are displayed.

Perhaps the chief aim of the rural gardening society is to have an exhibition, and in many a country village the event of the annual show is a red letter day of the year. There is scarcely need to describe it, for who has not been to a village flower show? Generally on the same day, and in the same field, the tent appears. You observed the horny-handed workers proudly stage the produce that has cost them many an hour of toil and care, you note the comparisons they make, and the decisions they arrive at before the judges allot the prizes, and afterwards you observe the eagerness with which they enter the tent to learn their fate. In the afternoon the band plays, the villagers, from the lord of the manor downwards, flock in between then and evening, and stout lads and winsome lassies trip the fantastic toe on the green turf. Such is the village flower show day, a time of absorbing interest to the gardening element, because it is the culmination of earnest effort, a day of healthy recreation and amusement to the villagers, and an event to be remembered till the time again rolls round for the next show. It is only those who are acquainted with village life and village gardening who can estimate the benefits derived from the institution of the flower show. I have watched their progress in many instances, and have observed the interest they have aroused. In every village there is a community of persons interested in gardening, and they only want stimulating.

The flower show has this effect, the spirit of competition asserts itself, enthusiasts vie with each other in friendly rivalry, and the general standard of gardening is raised in consequence. Exhibitors soon learn that to gain honours they must not only grow crops well, but they must grow the best forms. This prompts them to make a study of varieties, to search catalogues, to read horticultural literature, and to add to their stock of knowledge by every means possible. This all tends to improvement, and if a census could be taken of the best village gardeners in the country it would be found that they are mostly members of horticultural societies.

In some instances amateur societies are instituted for the sole purpose of running an annual show; but in such cases an element of general usefulness is lost. A gardening society should be one of mutual improvement, and this can hardly be the case when a show is held once a year, and the members rarely come into contact with each other except on these occasions. The tendency is to think too much of growing for the show alone, exhibitors are apt to grow mercenary, jealousies creep in, and these things have been the downfall of more than one society. In many country villages in the South of England the society is managed on different and better lines. There is the annual show, of course; but in addition to that the society has its headquarters, where meetings are held monthly, and in some cases fortnightly. Seasonable produce is staged at the monthly meetings, for which points are given. A record is kept of the latter, and at the end of the year prizes are given, the amounts varying according to the financial position of the society. To prove that prize money is not the sole aim of village gardeners, I could point to instances where men have exhibited regularly at the monthly

meetings and at the annual show, and through bad weather or other circumstances they have not received a penny in reward. But they have not withdrawn their support, and to their credit have kept on exhibiting just the same. In most cases the society is able to guarantee the prize money; but not in all, and I have known wet days to dash the hopes of the exhibitors entirely, though they have accepted the situation cheerfully, and worked unitedly to recoup the loss to the society.

The monthly meetings are interesting gatherings, and through them the members are kept in frequent touch with each other. Reserve is forgotten when they sit round the meeting room, and through the discussion much useful knowledge, founded on experience, is dispersed. In some instances arrangements are made for papers to be read, or lectures to be given, which adds greatly to the interest, and though the working cottage gardener is not much for public discussion, he is a profound listener, and in his quiet moments on his own little plot he proves by practice what he learns by precept in the meeting room. Further, it is worthy of notice that many of these societies are not run by influential persons under patronage. They are started and managed by the working men themselves, with as much financial support as they can get from outsiders. They may aim at no great things, in the eyes of some they perhaps appear to be conducted on monotonous lines; but the village gardening society has to move slowly and keep solvent, and with limited resources much enterprise is prohibited.

What I would point out is that societies, even in a small way, are the outcome of a true love for gardening. The support they get is perhaps not in proportion to the good they do, when we remember that their objects are to further horticultural interests, to circulate practical knowledge, and to encourage the cultivation of the best produce.—H.

## Abnormal Ferns.

Mr. R. Lloyd Praeger writes in the July number of "Knowledge" on Fern varieties: "In my last article the normal forms of our British Ferns were under brief consideration. In discussing the curious phenomenon of apospory, it may have been noticed that, in every instance, this was detected, not in the type form of any species, but in some abnormal variety. The abundance of these varieties in our native Ferns, and their marvellous range of variation, are very remarkable features, well worthy of consideration. In no other group of plants throughout the whole vegetable kingdom do we find such an amazing range of abnormal forms. They are often treated as mere florist's monstrosities, and no more worthy of recognition by the botanist than the rainbow-tinted galaxy of Chrysanthemums or Pansies; but two facts concerning them place them at once on a different footing. As many and as remarkable Fern varieties have been found in a state of nature as have been produced by the combined efforts of all the horticulturists; and a large number of them reproduce themselves absolutely true generation after generation, and are even capable of carrying (by crossing with other forms) their peculiar characters into other varieties. The features which distinguish these abnormal forms follow certain definite lines even in species of widely separated genera, and are capable of classification. A remarkable point about these Fern varieties is that they are essentially a British group of plants, and their study is a British hobby. While some foreign Ferns yield well-known varieties—such as the crested forms of several species of *Pteris* and *Maidenhair*—still these are as nothing compared with the wonderful number and range in character of those which have been found wild in our islands, notably in the south-west of England. Another curious point is that the species which are so variable with us appear to lose this character even in neighbouring countries. France and Germany have yielded one or two, but only one or two varieties, where English hedgerows have yielded literally hundreds. These varieties, sports, monstrosities, or whatever we choose to designate them, have occasionally a wide distribution, in which case they frequently obtain recognition from systematic botanists. Frequently—and this is a very remarkable fact—a highly abnormal variety, sometimes even one combining several quite abnormal features, will occur as a single plant growing amid normal forms, and the most careful search will reveal neither parent nor offspring, in spite of the high fertility of Ferns, while in cultivation it will propagate freely and preserve its peculiar character. That famous variety of the Lady Fern, *A. F.-f. Victoriae*, thus occurred in Stirlingshire—a form in which both the cruciate and crested characters are perfectly developed, and are constant in the offspring. The equally remarkably *A. F.-f. Frizelliae* has been twice found—in Wicklow and in Donegal—single plants in both cases, which can have had no connection with each other; and innumerable other instances might be cited."

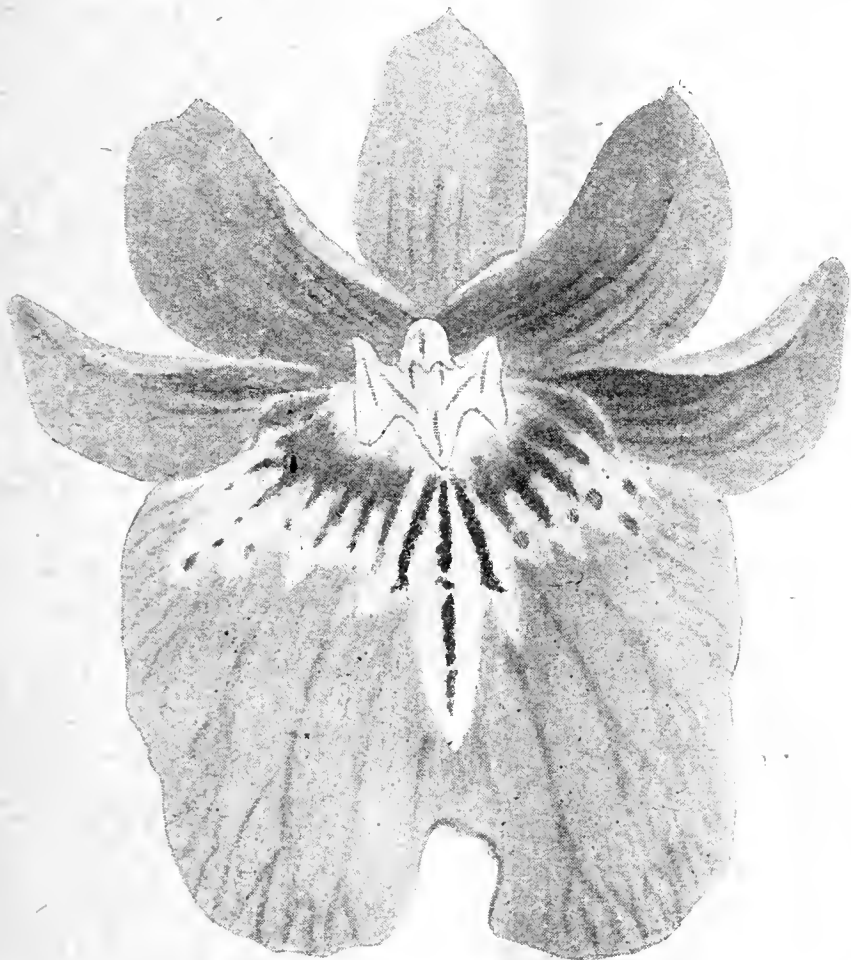


***Miltonia vexillaria* var. *gigantea*.**

It cannot be on account of its size that the variety was named, for there are other forms of *M. vexillaria* much larger. This variety was shown at the Holland Park Show on June 24 and 25, where a first-class certificate was awarded. Sir Frederick Wigan, Bart. (grower, Mr. W. H. Young), Clare Lawn, East Sheen, was the exhibitor of it. The variety is of a pleasing rose-purple colour, and not unattractive in form. Though *Miltenias* are showy in a group they are not individually pretty.

**The Week's Cultural Notes.**

I have received several communications lately respecting placing Orchids out of doors during the summer months. This is a phase of their culture that needs a good deal of consideration, for not only do species vary considerably in their likes and dislikes in this respect, but the position of the garden has



***Miltonia vexillaria* var. *gigantea*.**

much to do with the success or the reverse of the operation. The Anguloas, for instance, are just now finishing up their growth, and when this is complete they are without a doubt all the better for a few weeks in the open air to consolidate the growth.

I had a fine collection of these in a Wiltshire garden that was low-lying and near the water. They were placed outside every year about this time to their decided advantage, placed in the full sun, and watered at the roots. I took the same plants with me to a higher and drier locality and again placed them outside, only to bring them in again a few days later with scorched and burnt foliage. After this I had to be content with placing them in a cool, shady frame. This circumstance, then, will show that discretion must be used, and that what is right under some circumstances and in some places may be quite wrong in others.

That beautiful Mexican species *Lælia majalis* should always be put out of doors after the growth is complete, its hard, leathery foliage standing exposure to the sun much better than that of many others, while flowers are always produced with greater freedom than when the plants are always kept inside. Many others of the Mexican section are also benefited by exposure, *L. anceps*, *L. autumnalis*, *L. purpurea*, and many more. But in the case of the above noted species, the May flower, as it is termed, it is quite imperative that it has a few weeks in the open air.

The majority of the *Dendrobiums*, again, are greatly

benefited by being placed outside after their growths are fully developed. But it must be after, not before, or the growths will suffer. Should the pseudo-bulbs or stems be so late in growth that they are still unripe at the end of August, then they will be much better kept in, for after this there will be a danger of frost. Still, these could be placed in a sunny frame kept wide open by day in fine weather and closed at night. *Thunias*, again, many of the *Epidendrums*, *Oncidiums*, and others may be similarly treated; but the exposure must be gradual, and looked upon at first in the light of an experiment. —H. R. R.

***Cymbidium rhodocheilum*.**

For many years past there has been talk in Orchid circles of a scarlet-lipped *Cymbidium* which grew somewhere in the swamps of Madagascar, and which had cost the lives of more than one intrepid collector in search of it. When in June, 1892, a plant under the name of *Cymbidium Loise Chanvieri* was shown in London, and secured a botanical certificate, it was mistakenly thought the "scarlet" *Cymbidium* had arrived. It had been discovered by Leon Humblot, in Madagascar, but there was nothing scarlet whatever about its flowers. These were of a yellowish green, with black spots on the petals and blotches of a similar colour on the three-lobed, wrinkled lip, the whole flower reminding one forcibly of *Cœlogyne pandurata* owing to the peculiarity of its colouring and markings.

The new *Cymbidium*, however, now under notice is a quite distinct plant. It has been named *C. rhodocheilum* by Mr. Rolfe, of Kew, and now that it has flowered for the first time in cultivation in that establishment it is unanimously admitted to be one of the most remarkable *Cymbidiums* in cultivation. It has oblong, conical pseudo-bulbs, more or less compressed and about 6 in in length. The leathery leaves are 2 ft to 2½ ft long, not more than an inch broad, channelled down the front, and strongly keeled behind. The flower spike springs from the base of the new and leafy pseudo-bulb, and is 2 ft or more high. It stands quite erect, and carries about twenty flowers. Only about eight or nine of these, however, are open at the same time, and the still unopened buds are remarkable for the exudation of large drops of crystalline nectar at the base.

The flower itself is about 4 in across, with oblong, lance-shaped petals of a soft and pleasing yellowish green without any spots. The petals stand more or less erect, but are broader. They have the same ground colour as the sepals, but are heavily blotched and dotted with black all over the surface, the blotches being thicker in the centre. The lip, however, is the remarkable feature of the flower. It is very large in proportion to the other segments, and has an extraordinary spreading front lobe, broadly obcordate in outline, and of a rich and pleasing rosy-red colour, with deeper veins radiating from the centre to the margins. The side lobes at the base stand erect, one on each side of the bright yellow disc, with purple warts, while at the very base is a raised semi-circular callus of shining ivory white, somewhat similar to the boss in the flower of *Cynochilus chlorochilus*.

*Cymbidium rhodocheilum* was introduced from Madagascar by a Belgian collector named Warpur, in the year 1890. One or two plants were sent to Kew. One has now flowered there, and enabled me to furnish this description and explanation. A few other plants were put into commerce, but so far they have not flowered, although they are doing well. In its native state this *Cymbidium* is invariably found growing on masses of Stag's-horn Fern, *Platyserium Madagascariense*. It seems to delight in plenty of peat and a very humid atmosphere, but not too much water. Judging by the Kew specimen, it is an easy plant to grow if one has just the right kind of house, and it is a great pity that only a few plants of it are known.—W.

[A very good illustration of the species accompanies these notes in the "American Florist" of June 28.]

## Tomatoes Under Glass.

**LATE CROPS.**—The early-raised plants trained up the roof of a light, well-ventilated, properly heated house, now nearly cleared of their first heavy crops, may be made to produce ripe fruit in abundance next autumn and winter. Remove much of the old foliage, allow shoots to form on the main stems, and reserve a portion of these for laying in and cropping. If plentiful stop these growths a joint beyond where a cluster of fruit is set, but if somewhat scarce, especially in the case of basal growths, allow them to extend, and train with a view to having the roof thinly covered with fruiting growths. Closely remove all superfluous side shoots. The plants, whether rooting in pots, boxes, or ridges of soil, should have some of the latter removed from the roots, and a top-dressing of fresh fibrous loam and manure applied at once. A free course of air, warm and dry, is a good antidote for diseases of a fungoid nature that infect from the atmosphere.



A house newly cleared of Melons or Cucumbers is just the place for a winter crop of Tomatoes, the young plants being sturdy and ready for planting now. The crops must be set on the plants before the days become short and dull, otherwise they will probably be very light. First give the house a thorough cleaning in order to get rid of insect pests, and freshen up the soil previously used for either Melons or Cucumbers for the Tomatoes. Plant 15in or 16in distance apart, and train to a single stem up the roof, rubbing off all side growths or laterals as they appear. Nothing is gained by disposing the plants more closely together; but, on the contrary, the greatest weight of fruit is borne by those more thinly planted. Frogmore Selected, Chemin Rouge, and Ham Green Favourite are amongst the best for present planting.—A.

## Fruit Trees.

### The Value of Feeding.

The great advantages to be obtained by feeding wall trees when they are carrying heavy crops has long been recognised and acted upon in British gardens, and it is a pity that the practice is not more generally extended to hardy fruits grown as bushes and standards. In the case of young, vigorous trees of Apples and Pears feeding is sometimes unnecessary, if, when the crops are heavy, the fruit is thinned; but when they get older high feeding does wonders in securing samples of high quality, and there are thousands of trees in this country which should be in their prime, yet which only bear inferior fruits simply because they are starved.

A few years ago I saw a large tree carrying one of the heaviest crops of really good, highly coloured Apples that I have ever seen, and, in addition to receiving a good coating of manure after the fruit was set, the tree was watered regularly with liquid manure throughout the season. The variety was Bess Pool, and in a plentiful season they realised a good price in the market. Now, if this tree had received but ordinary attention quite an inferior sample of Apples would have been produced, which probably would scarcely have paid to send to market. This one illustration is quite enough to "point the moral," though many others might be advanced.

Neither Apples nor Pears are generally a heavy crop this year, though in some instances they do occur; and now is the time to make the best of them by feeding liberally so as to swell them up to full size. In gardens, and in some orchards, liquid manure can be easily applied, because it is near at hand. In such cases nothing is better for the purpose, as it acts quickly on both fruit and trees, giving vigour to the one, and size and colour to the other. Two or three applications during the season would work wonders with such trees, provided the liquid is given in sufficient quantities to thoroughly moisten the soil as far as the branches extend, and that it is not used in too strong a state. Judgment in this respect is necessary; sometimes it may be used at half strength, at others it needs diluting with from four to six times its bulk of water. In large plantations watering with liquid manure is, of course, not practicable, neither can the trees in some private gardens have such attention, but dung or artificial manure can generally be applied. A thin coating of the former in a well-decayed state would conserve the moisture in the soil, and, by bringing active roots to the surface, keep the fruit swelling freely. A heavy dressing of manure is not to be commended, as it prevents the sun and air from acting on the soil, and, in a cold season, retards the colouring of the fruits.

Among chemical manures fish guano is excellent for assisting fruit trees carrying a heavy crop. It should be applied, if possible, when the soil is damp, at from 4oz to 6oz per yard. As a substitute superphosphate (four parts) and sulphate of ammonia (one part) may be mixed together, and applied at the rate of 3oz per yard. One ounce of nitrate of soda per yard if given in showery weather will often prove of great assistance to the swelling fruits, but, of course, it will not do to depend on the nitrate alone year after year. The above remarks on feeding are intended to apply to trees carrying heavy crops, which, therefore, need extra assistance to enable them to produce really good fruit instead of mediocre samples.

This summer feeding ought, however, in no way to interfere with the winter manuring. Nearly all fruit trees, when they begin to bear full crops, are benefited by the application of superphosphate or basic slag, in autumn or winter, in addition to dung, chopped rags, shoddy, or sprats; but judgment is necessary in the matter. Those which continue to grow vigorously should not be manured, while others growing in poor soil sometimes need feeding before they begin to bear much fruit. Each tree must be treated individually if the best results are to be obtained.

As things stand at present, we hear on the one hand complaints about trees making strong sappy growth which dies back during a sharp winter; and, on the other, the cry is that the growth is so stunted that young and middle-aged trees fail to increase in size.—H. D.

## Examination in Horticulture, 1902.

The annual examination in the Principles and Practice of Horticulture was held under the auspices of the Royal Horticultural Society on April 23, 1902, when 229 papers were sent in. Three hundred marks were allotted as a maximum, and all candidates who obtained 200 marks and upwards were placed in the first class. The total number was 97, or about 42.3 per cent. The highest number of marks, 285, was awarded to Miss W. M. Buttenshaw, of the Horticultural College, Swanley, Kent. Those who secured 150 and less than 200 marks were placed in the second class. The number was 98, or about 42.7 per cent. Those who obtained 100 marks and upwards were ranked in the third class. The number was 28, or about 12 per cent. Six candidates obtaining less than 100 marks were not placed.

A slight increase in the number of entries has occurred, 225 being that of 1901; but still it falls considerably short of that in 1900, viz., 236. The percentage of the first class was 48 in 1901, so that it has somewhat fallen; while that of the second class has risen from about 38 to 42. The percentage of the third class is nearly stationary, having only slightly improved from 11 to 12.

The lowering of the percentage of the first class, as well as only two candidates obtaining more marks than 275, is attributable to the somewhat higher standard in the character of the questions. Some students had evidently prepared themselves for meeting such questions as might be asked upon the revised "Requirements."

In the "Principles" there were no serious mistakes, but merely varying degrees of knowledge upon the matter treated of in the replies. The answers as a whole were well expressed, showing considerable care in preparation.

In the horticultural practice department the candidates kept well to the questions they had to deal with, except in the one relating to landscape gardening; on this subject there is considerable room for improvement. It is a subject that might be dealt with in various phases, and some of the candidates were fully alive to the main points they were asked to deal with. Some of the other questions were not so much dealt with in detail as they ought to have been; owing to this very few obtained the full number of marks. Upon the whole the answers were very satisfactory, and, as the questions were rather more difficult than on previous occasions, the result is quite as good as we expected.

Examiners { GEORGE HENSLOW.  
JAMES DOUGLAS.

### FIRST CLASS.

|   | No. of Marks gained. |
|---|----------------------|
| 1. Buttenshaw, W. M., Swanley College ... ..                    | 285                  |
| 2. Moore, Harold, 17, Mundania Road, Honor Oak, S.E. ...        | 280                  |
| 3. Crabtree, G. H., Kirklees Park Gardens, Brighouse ...        | 275                  |
| 4. Bowden, M. A., Reading College and Lady Warwick Hostel       | 270                  |
| Brown, W. R., Cally Gardens, Gatehouse, Kirkcudbrightshire      | 270                  |
| English, M., Swanley College ... ..                             | 270                  |
| Huckle, M. J., 53, Birkenhead Avenue, Kingston ...              | 270                  |
| Humphrey, L. J., Essex County School of Horticulture ...        | 270                  |
| Smith, S. P., Benson School, near Wallingford ...               | 270                  |
| Turner, J. S., The Gardens, Dochfour, Inverness-shire ...       | 270                  |
| Warner, J., The School, Burleydam, Whitechurch ...              | 270                  |
| 12. Bebbington, L., The School, Pulford, Wrexham ...            | 265                  |
| Butler, E. W., Swanley College ... ..                           | 265                  |
| Turner, F., The School, Eccleston, Chester ...                  | 265                  |
| 15. Ardington, M., Swanley College ... ..                       | 260                  |
| Hicks, George, Ardington, Wantage ... ..                        | 260                  |
| 17. Selden, G. P., Woodhatch House Gardens, Reigate ...         | 255                  |
| 18. Donoghue, J., Tranby Croft Gardens, Hull ...                | 250                  |
| Learoyd, T. W., The School, Rostherne, Knutsford ...            | 250                  |
| Swift, J. W., County Technical School, Stafford ...             | 250                  |
| 21. Darby, T. W., C.C. Farm School, Old Basing, Basingstoke ... | 245                  |
| Day, William, Long Wittenham, Abingdon ...                      | 245                  |
| Driver, J., School House, Crowton, Northwich ...                | 245                  |
| Lloyd, G. E., The School, Tattenhall, Cheshire ...              | 245                  |
| Lowe, J. L., The School, Disley, Stockport ...                  | 245                  |
| Nicholls, H. R., School House, Warborough, Wallingford ...      | 245                  |
| Oddie, E. M., County Oak, Crawley, Sussex ...                   | 245                  |
| Pollard, G. E., Swanley College ... ..                          | 245                  |
| Powell, E. H., Swanley College ... ..                           | 245                  |
| Smith, F., The School, Worleston, Nantwich ...                  | 245                  |
| Wimpress, H., Swanley College ... ..                            | 245                  |
| 32. Clewley, C. H., County Technical School, Stafford ...       | 240                  |
| Langmore, E., Reading College and Lady Warwick Hostel ...       | 240                  |
| Ross, E., The School, Hale Barns, Altrincham ...                | 240                  |
| 35. Humphreys, F. W., County Technical School, Stafford ...     | 235                  |
| 36. Bourne, E. B., Swanley College ... ..                       | 230                  |
| Brown, Stanton, Edwinstowe, Newark, Notts ...                   | 230                  |
| Cleeves, Vincent, 6, Garth Hill, Bassaleg, Mon. ...             | 230                  |
| Schneider, E., Swanley College ... ..                           | 230                  |
| Silvers, A. J., County Technical School, Stafford ...           | 230                  |
| Trollope, T., Middleton Park Gardens, Bicester ...              | 230                  |

## FIRST CLASS—continued.

No. of Marks  
gained.

|     |  |     |
|-----|--|-----|
| 42. | Anson, W. H., Churchill, Chipping Norton, Oxon               | 225 |
|     | Bidwell, L. S., Reading College and Lady Warwick Hostel      | 225 |
|     | Bull, H. M., Essex County School of Horticulture             | 225 |
|     | Butler, R., Reading College and Lady Warwick Hostel          | 225 |
|     | Dobbie, H. B., Pine Banks, Thorpe St. Andrews, Norwich       | 225 |
|     | Draper, M., Swanley College                                  | 225 |
|     | Duguid, M., F.R.H.S., Swanley College                        | 225 |
|     | Emlyn, E. S., Swanley College                                | 225 |
|     | Heald, C. W., Weaverham, near Northwich                      | 225 |
|     | Johns, E. L. M., Reading College and Lady Warwick Hostel     | 225 |
|     | Mallinson, J. W., 9, Waterloo Place, Kew Green, Surrey       | 225 |
|     | Millard, M., Reading College and Lady Warwick Hostel         | 225 |
|     | Pickerrill, J., The School, Broom Hall, Nantwich             | 225 |
|     | Rendle, A., Essex County School of Horticulture              | 225 |
|     | Robb, A., Essex County School of Horticulture                | 225 |
|     | Scott, Kenneth, Essex County School of Horticulture          | 225 |
|     | Yeates, T., Sutton Courtenay, Abingdon                       | 225 |
| 59. | Dutton, C. D., Springhall, Sawbridgeworth                    | 220 |
|     | Hathaway, J., County Technical School, Stafford              | 220 |
|     | McKechnie, W. C., The Gardens, Ffrwdgrech, Brecon            | 220 |
|     | Mitchell, J., The School, Haslington, Crewe                  | 220 |
|     | Williams, A., The School, Hassall Green, Sandbach            | 220 |
| 64. | Bennitt, W. E., County Technical School, Stafford            | 215 |
|     | Dines, J., Essex County School of Horticulture               | 215 |
|     | Dutton, G. F., Aldersey School, Bunbury, Tarporley           | 215 |
|     | Graves, W. B., County Technical School, Stafford             | 215 |
|     | Longmire, F., 77, Earlsfield Road, Wandsworth, S.W.          | 215 |
|     | McDonald, A. J., King's Meadows Gardens, Peebles             | 215 |
|     | Nixon, W., Whitley Park Farm, Reading                        | 215 |
|     | Perry, A. M., Reading College and Lady Warwick Hostel        | 215 |
|     | Schofield, S. H., The School, Dean Row, Wilmslow             | 215 |
|     | Scourfield, G., Ty-Gwyn Gardens, Neath, Glam.                | 215 |
|     | Swaine, R., F.R.H.S., Swanley College                        | 215 |
|     | Walters, J., County Technical School, Stafford               | 215 |
|     | Whetham, V. S., Swanley College                              | 215 |
| 77. | Bartley, J., County Technical School, Stafford               | 210 |
|     | Forster, Y. I., F.R.H.S., Swanley College                    | 210 |
|     | Moore, H., The School, Wheelock, Sandbach                    | 210 |
|     | Poyer, F. T. P., Swanley College                             | 210 |
| 81. | Baldwin, W., Horticultural School, Holmes Chapel             | 205 |
|     | Colvin, J. S., Hampton Hall Gardens, Balbriggan, Co. Dublin  | 205 |
|     | Cowley, H., Swanley College                                  | 205 |
|     | Creasy, B., Essex County School of Horticulture              | 205 |
|     | Hodgkinson, W., The School, Cranage, Holmes Chapel           | 205 |
|     | Hotten, A. P., Swanley College                               | 205 |
|     | Ingles, M. G., Essex County School of Horticulture           | 205 |
|     | Thomas, G., Coedmore Gardens, Cardigan                       | 205 |
|     | Tobin, L., Reading College and Lady Warwick Hostel           | 205 |
|     | Townend, J. W., The Cottage, Clevelands, Birkdale, Southport | 205 |
|     | Will, H., Reading College and Lady Warwick Hostel            | 205 |
|     | Worsfold, H. G., Paddockhurst Gardens, Crawley               | 205 |
|     | Young, W. H., Swanley College                                | 205 |
| 94. | Leighton, F., School House, Lydiard Tregoze, Wootton Bassett | 200 |
|     | Masson, G., 8, Dunrobin Place, Edinburgh                     | 200 |
|     | Mordaunt, G., Swanley College                                | 200 |
|     | Willoughby, J. B., Bennie Cottage, Causewayside, Tolleross   | 200 |

## SECOND CLASS.

|      |  |     |
|------|--|-----|
| 98.  | Cameron, John, Essex County School of Horticulture           | 195 |
|      | Dent, Thomas, Howbery Park, Wallingford                      | 195 |
|      | Harding, P., Horticultural School, Holmes Chapel             | 195 |
|      | Herman, W., Ewelme National School, Wallingford              | 195 |
|      | Hine, T., Coombe Ridge, Kingston Hill                        | 195 |
|      | Hirst, S. R., The School, Broken Cross, Macclesfield         | 195 |
|      | Hodgson, G. H., 1, Mayfield Terrace, Gateshead-on-Tyne       | 195 |
|      | Hulme, H., Horticultural School, Holmes Chapel               | 195 |
|      | Judson, H. R., Castle Hill Gardens, Rotherfield              | 195 |
|      | Keene, C. E., County Technical School, Stafford              | 195 |
|      | Little, H., Essex County School of Horticulture              | 195 |
|      | Manning, S., Horticultural School, Holmes Chapel             | 195 |
|      | Masterton, D., 32, Hay Terrace, Edinburgh                    | 195 |
|      | Parker, R. W., Horticultural School, Holmes Chapel           | 195 |
|      | Percival, C. P., Astbury School, Congleton                   | 195 |
|      | Reed, H. T., Cromer Villa, Clifton Road, Kingston Hill       | 195 |
|      | Walkden, C. H., The Gardens, Virginia Water, Surrey          | 195 |
|      | Ward, H., Essex County School of Horticulture                | 195 |
|      | Willan, G., Ivy Cottage, Lymm, Cheshire                      | 195 |
|      | Williamson, T., Horticultural School, Holmes Chapel          | 195 |
| 118. | Bayliss, I., Spelsbury National School, Charlbury, Oxon      | 190 |
|      | Clarkson, J., Hook Norton, Banbury                           | 190 |
|      | Davies, M., Essex County School of Horticulture              | 190 |
|      | Dolman, E. G., Tredegar Park, Newport, Mon.                  | 190 |
|      | Durham, E., King's End, Bicester                             | 190 |
|      | Fayers, M. A., Upper School, Abinger, Dorking                | 190 |
|      | Grundy, S., Swanley College                                  | 190 |
|      | Hancock, T., British School, Wheelock, Sandbach              | 190 |
|      | Head, G. H., Poltimore Park Gardens, Exeter                  | 190 |
|      | Hodgson, J. T., The School, Elworth, Sandbach                | 190 |
|      | Hulbert, W. C., The Hermitage, Jarvis Brook, Tunbridge Wells | 190 |
|      | Jolley, E., Jubilee Road, Waterloo Ville, Cosham             | 190 |
|      | Jones, D. G., Horticultural School, Holmes Chapel            | 190 |
|      | Lane, F. G., School House, Kingston Bagpuze                  | 190 |
|      | Laugher, H., County Technical School, Stafford               | 190 |

## SECOND CLASS—continued.

No. of Marks  
gained.

|      |   |     |
|------|---|-----|
|      | Lester, Thos. J., Horticultural School, Holmes Chapel                 | 190 |
|      | Martins, A. V., Essex County School of Horticulture                   | 190 |
|      | Mitchell, F., School House, Culham, Abingdon                          | 190 |
|      | Oulton, R., Horticultural School, Holmes Chapel                       | 190 |
|      | Parker, J. C., County Technical School, Stafford                      | 190 |
|      | Pearce, A. J., Milton C. E. School, Milton, Steventon, R.S.O.         | 190 |
|      | Smart, A., The Gardens, Lesmurdie, Elgin, N.B.                        | 190 |
|      | Smith, W. H., 33, Lancaster Street, Barnsley, Yorks                   | 190 |
|      | Williams, M. A., Wesley Cottage, Bicester                             | 190 |
| 142. | Lee, James, The Gardens, Woolton Wood, Woolton                        | 185 |
|      | Russ, H. D., Whitmore Lodge, Worplesdon, near Guildford               | 185 |
|      | Warburton, W., 45, Cranworth Street, C-on-M., Manchester              | 185 |
|      | Wilks, Alf., County Technical School, Stafford                        | 185 |
| 146. | Biddle, J. L., Charlton Lodge, Surbiton Road, Kingston                | 180 |
|      | Bishop, R., 262, Burrage Road, Plumstead, Kent                        | 180 |
|      | Chapelow, H. D., Essex County School of Horticulture                  | 180 |
|      | Edwards, A., Park Hall, Spink Hill, Chesterfield                      | 180 |
|      | Hart, F. W., County Technical School, Stafford                        | 180 |
|      | Hogan, D. C., 75, Leyton Road, N.W.                                   | 180 |
|      | Humphrey, H. P., F.R.H.S., 11, Marlboro' Buildings, Bath              | 180 |
|      | Nock, T., The School, Brereton, Sandbach                              | 180 |
|      | Sanderson, W., Ardtornish, Morvern, Argyllshire                       | 180 |
|      | Smith, B., F.R.H.S., Swanley College                                  | 180 |
|      | Tunstill, F., The School, Henbury, Macclesfield                       | 180 |
|      | Willans, E. F., Reading College and Lady Warwick Hostel               | 180 |
| 158. | Jeffery, F. W., Moor Court Gardens, Oakamoor, N. Staffs.              | 175 |
| 159. | Blair, J. S., Toravon Lodge, Polmont Station, Stirlingshire           | 170 |
|      | Blanche, E., 26, St. Paul's Street, Ramsbottom, Lanes                 | 170 |
|      | Cassels, E. M., Glencairn, 6, Belsize Road, Worthing                  | 170 |
|      | Drummond, D. H., Crowmarsh Gifford, near Wallingford                  | 170 |
|      | Henderson, A., Essex County School of Horticulture                    | 170 |
|      | Hoyes, W., 8, Gower Street, Sheffield                                 | 170 |
|      | Lee, Joseph, 328, Atherton Road, Hindley Green, near Wigan            | 170 |
|      | Pawlett, M., Swanley College  | 170 |
|      | Sibley, J., The Grove, College Road, Dulwich Common                   | 170 |
|      | Simmonds, A. E., Ormond Road, Wantage, Berks                          | 170 |
|      | Stayner, F. J., The Lilies, Epsom Road, Croydon                       | 170 |
| 170. | Hunter, J., 52, Castle Street, Woolton                                | 165 |
|      | Mallabar, W., Heathfield Gardens, Gateshead-on-Tyne                   | 165 |
|      | Painton, A., Winterbrook, Wallingford                                 | 165 |
|      | Smith, W. S., Swanley College   | 165 |
|      | Taylor, T., County Technical School, Stafford                         | 165 |
| 175. | Barwell, F., 73, King's Road, Kingston-on-Thames                      | 160 |
|      | Braggins, Samuel W., Edith Villas, Tatchbrook Road, Feltham           | 160 |
|      | Campbell, D. M., Wells Gardens, Hawick, N.B.                          | 160 |
|      | Dennis, E., 11, Carter's Cottages, St. John's, Redhill                | 160 |
|      | Hay, James D., F.R.H.S., Culverlands, Woking                          | 160 |
|      | Hunter, T., The Gardens, Coombe Cottage, Kingston                     | 160 |
|      | Parker, C. H., Swanley College  | 160 |
|      | Selsby, J. S., Laxfield, Framlingham                                  | 160 |
|      | Walker, J. H., County Technical School, Stafford                      | 160 |
| 184. | Godwin, E., 39, Courtenay Street, Cheltenham                          | 155 |
|      | Shaw, J., Stormerhill Cottage, Tottington, near Bury                  | 155 |
| 186. | Burgess, E., The Laurels, Benson, Oxford                              | 150 |
|      | Carr, E. B., The School, Eaton, Congleton                             | 150 |
|      | Coward, H. V., 21, Merton Hall Road, Wimbledon                        | 150 |
|      | Grieve, S. G., The School, Bridgmere, Nantwich                        | 150 |
|      | Hoyle, G., Nuffield Board School, Henley-on-Thames                    | 150 |
|      | Overton, E. A., 5, Crawborough, Charlbury                             | 150 |
|      | Polkinghorne, F. J., The Gardens, Polgwin, Bodmin                     | 150 |
|      | Scott, E. H., 22, Gladstone Villas, Wallingford                       | 150 |
|      | Simms, L., 3, Plantation Road, Oxford                                 | 150 |
|      | Watson, J. W., F.R.H.S., Upper Sleigh Lea Gardens, Fulwood, Sheffield | 150 |

## THIRD CLASS.

|      |   |     |
|------|---|-----|
| 196. | Black, W., The Gardens, Ashton Hall, Lancaster                | 140 |
|      | Blackshaw, W. R., Horticultural School, Holmes Chapel         | 140 |
|      | Cairns, W. J., Heatherwick, Otterburn, Northumberland         | 140 |
|      | Gammon, V., The Gardens, Middleton Park, Bicester             | 140 |
|      | Manning, H. P., Essex County School of Horticulture           | 140 |
| 201. | Yates, H., 37, Cemetery Road, Tonge, Bolton, Lanes            | 135 |
| 202. | Bedwell, W., 1, Loughborough Villas, Carshalton               | 130 |
|      | Byrom, W., 11, Cam Street, Woolton                            | 130 |
|      | Martin, T., The Gardens, Woolton Wood, Woolton                | 130 |
|      | Salway, W. H., 33, Stopford Road, St. Heliers, Jersey         | 130 |
| 206. | Woodnutt, W. E., Orchardleigh, Catisfield                     | 125 |
| 207. | Blackshaw, A., George Street, Altrincham                      | 120 |
|      | Bowell, E. C., Blenheim Gardens, Woodstock                    | 120 |
|      | Butt, T., Bournecroft Cottage, Whyteleaf, Surrey              | 120 |
|      | Goble, W. E., Kingswood Warren Gardens, Epsom                 | 120 |
|      | Gray, R., Horticultural School, Holmes Chapel                 | 120 |
|      | Turner, C., Blenheim Gardens, Woodstock                       | 120 |
|      | Worthington, J. B., Horticultural School, Holmes Chapel       | 120 |
| 214. | Wright, J., The Gardens, Talbot House, Edinlurh               | 115 |
| 215. | Dent, W. J., Swyncombe National School, Henley                | 110 |
|      | Fergusson, R. F., 25, Borough Road, Kingston                  | 110 |
|      | Price, J., East Lodge, Strathbraun, Shillingford, Wallingford | 110 |
|      | Robson, H. F., R.H.S. Gardens, Chiswick, W.                   | 110 |
| 219. | Chapman, G. M., Cornwall House, Leopold Road, Wimbledon       | 105 |
|      | James, R. H., Gorphwysfa, Dinas Powis, Cardiff                | 105 |
|      | Kneller, P. C., Laureldan, Petersfield, Hants                 | 105 |
|      | Spencer, J., 40, Lower Church Street, Warwick                 | 105 |
| 223. | Luxford, C., 3, James Street, Illey Road, Oxford              | 100 |





#### A Rose-covered Corridor.

During my rustic rambles recently I met with a delightful feature in a garden which perhaps impressed me all the more because it came to view quite suddenly. After turning a sharp corner I saw before me a long glowing line of pink Roses, connecting the house with the entrance from the road. This I found to be a substantially built corridor 20 or 30 yards in length. The roof, which was covered with tiles, was supported on strong pillars, placed 9ft to 12ft apart. Against each pillar a strong growing Rose had been planted, and these have thrived so well as to entirely cover the pillars and roof of the covered way. There were several varieties of Roses, but as all were pink or rose in colour the effect was most imposing. I had no opportunity of closely inspecting them, but as far as I could see the varieties were Pink Roamer, Jessica, and Dundee Rambler. The thought struck me after seeing this display, that no one should tolerate a building with a bare roof in the dressed garden, but should cover it as quickly as possible with some attractive, strong growing Rose. The old and beautiful flesh coloured Ayrshire Ruga, will do this as rapidly as any climber I know of.—H. D.

#### Roses for Cutting.

The national flower of England has certainly been well chosen, seeing how constantly its popularity has been maintained, and how well it responds to good culture in widely separated lands. Wherever Englishmen go the Rose seems to follow, and speak in fragrance and beauty of the "old home across the sea." The present year of grace will undoubtedly give a great impetus to Rose growing in other lands, seeing how many "sons of the Empire" have been visiting the old home at a time when the Rose is in full glory. Some of them will have visited the great Rose shows and prominent gardens when Roses are a feature, and will leave behind orders for "England's best" in the shape of Rose trees, wherewith to adorn the homes of their adoption, with a souvenir of a momentous year. Our welcomed visitors will, no doubt, have already made their choice from specimens which took their fancy, and although all Roses are good for cutting some are better than others, because of their general floriferousness, stiffness of stem, and distinct or taking colour. I therefore propose to deal briefly with the varieties specially suitable for that purpose; such remarks will of course appeal to Rose lovers at home as well as abroad.

I will deal with the Hybrid Perpetuals first, because they are so hardy and always give a sure return when liberally treated. Mrs. J. Laing is very hard to beat among the soft pink kinds, as it grows strongly, and the finely shaped fragrant flowers stand up boldly. Madame Gabriel Luizet, somewhat paler in colour, the flowers being sweet and prettily cupped, is also a lady to be relied upon, always pleasing and of sound constitution. Baroness Rothschild, rose coloured, and Captain Christy, flesh coloured, are grand sorts to grow for cutting, although the former lacks perfume. La France, the most beautiful of all in regard to form, has one weak point, viz., that it is often too thin in the stem; nevertheless it is worth growing in quantity, as by thinning the growths freely and growing it in an open position the stems strengthen considerably. Général Jacqueminot, is universally popular because of its bright crimson colour—it flowers freely, and needs plenty of feeding to get it strong in the stem. Both this and crimson-scarlet Duke of Edinburgh are varieties to grow in quantity. Suzanne Marie Rodocanachi, although not generally considered as a Rose to grow for cutting, should, in my opinion, receive more attention, as the growth is strong and both flowers and foliage grand. Captain Hayward, bright red, is also grand. For producing extra large blooms the following are not easily beaten: Ulrich Brunner (cherry red), Margaret Dickson (white-tinted flesh), Merveille de Lyon (white-tinted pink), and Her Majesty (flesh).

The Hybrid Teas form a popular class which during recent years have received several grand additions, two of the best being Mrs. W. J. Grant and Kaiserin Augusta Victoria. The former is a sulphury white, the latter rich pink. Marquis Litta, with its long pointed crimson buds, is also a superb Rose for cutting. Among older kinds, Lady Mary Fitzwilliam (flesh), Viscountess Folkestone (creamy white), Grace Darling, and Madame Caroline Testont, are all worthy of being largely grown. The rich velvety crimson Liberty, I should have included among the newer varieties. Although the flowers are by no means large, it has this season proved one of the most popular Roses grown. For growing under glass the Teas are, of course, in the greatest request, but there is no reason why they should not be grown more largely in the open air. Severe weather

during the winter and spring necessarily affects them considerably, but with a little protection and late pruning the risks are reduced to a minimum, and when good flowers are secured the hearts of all rosarians go out to the lovely, delicately perfumed Teas.

The following are fine hardy varieties which usually give good results in the open air, when grown as bushes, or against low walls and fences: Bridesmaid (deep pink), Catherine Mermet (salmon rose), Ernest Metz (carmine rose), and Souvenir d'un Ami. These, to my mind, are decidedly the best of their respective shades of colour. Isabella Sprunt (lemon yellow), Perle des Jardins (rich yellow), and Madame Hoste (yellowish white) are the pick of the yellows for their hardiness and free flowering qualities. Homère (rose, small), Hon. Edith Gifford (flesh), Madame Lambert (bright red), Madame Bremont (coppery yellow), Rubens (rose and white), and Sunset (deep apricot) are all good. The Bride and Souvenir de S. A. Prince cannot, I think, be beaten among the whites. No garden should be considered complete without a few Moss Roses, for in the bud state they are delightful additions to any arrangement of cut Roses. Here are a few good varieties: Cristata (pink), Old Moss (pink), White Bath, Blanche Moreau (white), and Eugénie Verdier (crimson).

In establishments, when large quantities of cut flowers are required, it is an excellent practice to grow considerable numbers of Rose bushes in the reserve garden, as it always seems a pity to destroy the beauty of a Rose garden by cutting the flowers wholesale when the garden should look at its best. Another advantage secured by following the plan advised is, that special attention can be given to feeding during the summer, so as to secure blooms of very high quality.—WARWICK.

#### Planting Roses too Deeply.

We have recently lifted a lot of standard Roses that had been planted some three or four years and had not succeeded too well. The reason of their doing badly was not far to seek. They were planted from 1ft to 18in in the earth. This state of things is not at all uncommon, especially with the work of that genus known as the jobbing gardener. Plants so put in cannot be expected to do well. The few roots they have are in the least fertile of the soil, and whatever manure is afterwards used may not reach them.

Standard Roses should have the roots just covered only, and to prevent dryness a mulch of manure ought to be spread around the stems during the summer. Considering the amount of top a Rose has it is astonishing how few roots we find to support it; therefore, it is necessary that every fibre should be in perfect health. Plant shallow and securely stake should be the rule with standard Roses. Dwarfs, again, are often planted too deep. The roots should be spread out to their full length in a wide, shallow hole rather than thrust straight into a narrow one. We like to just cover the junction of stock and scion when the work of planting is finished. Always mulch newly-planted Roses. This not only protects them from hard weather, but keeps the plants in position. It is well, too, to shorten any shoot of undue length; these only become a means for wind to loosen the whole plant if left.—H. S.

#### Roses at Kew.

No one passing through the Rose-dene near the pagoda at Kew can do so without stopping to peer into the great mass of Crimson Rambler which forms such a gorgeous semi-circular group on the left hand side going west. Its frontage runs to 55yds, but the whole plantation is so arranged as to be visible in one splendid view. This dene, or little dell, was a gravel pit some years ago, but by the use of clayey soil and manure, and the employment of large tree-roots, a perfectly adapted site for Rambler, and climbing Roses generally, was obtained. The climbing kinds were planted all along the back of this prepared site, and here and there a mass or group was brought forward to the central path, which is laid in grass and is slightly curved. There is no entire view from end to end, the object being advisedly to display only a portion of the splendid collection at a time. Large bays are formed for Briar Roses at intervals on the right hand side, the Crimson Rambler group occupying nearly the whole of the opposite side, as I have said.

In planting this huge mass of so handsome a Rose, the back parts were raised in order that the floral exhibition could all be seen from the pathway, and the long, robust shoots hang down over the roots and faggots at the front edge in rich profusion. The feature might very well be copied on many other gardens, even if the same amount of space could not be given.

Amongst others of the Roses in groups and masses here we have noted the Austrian and Harrisoni Briars, the rugosas and numerous hybrid forms, as rugosa x Wichuriana, rugosa x Général Jacqueminot, or, again, the weeping Wichuriana and Général Jacqueminot Hybrid Perpetual. The Prairie Rose (*R. setigera*), with *R. cehroleuca*, Noisette Fellenberg, Carmine Pillar, Flora, the Dawson Rose, and many others further contribute towards the interest and beauty of the collection.—J. H. D.

# NOTES & NOTICES

## The Midland Carnation and Picotee Society.

At a committee meeting held on Thursday last, it was decided, on account of the lateness of the season, to postpone the exhibition of the above society till Thursday and Friday, August 7 and 8, instead of July 30 and 31, as originally fixed.

## Crystal Palace Fruit Show.

The Royal Horticultural Society's ninth great annual show of British grown fruit will be held at the Crystal Palace on September 18, 19, and 20. For schedule of prizes, including special ones for bottled and preserved fruits, and full particulars, apply to the Sec., R.H.S., 117, Victoria Street, S.W.

## South Shields and Northern Counties Chrysanthemum Society.

We are asked to draw attention to an advertisement under "Shows" on the second page, wherein are offered good prizes by the above society. Its show is being resuscitated after a lapse of a few years, and we cordially wish that fine weather may prevail for this year's exhibition, and that in every way it may be successful.

## United Horticultural Benefit and Provident Society.

The usual monthly committee meeting of this society was held on Monday evening last, at the Caledonian Hotel, Adelphi Terrace, W.C., Mr. C. H. Curtis in the chair. After the minutes of the last meeting were read and signed four new members were elected. The death of a member was reported, and the amount standing to his credit in the ledger was granted to his nominee. A request for assistance from the convalescent was granted to a member who has been ill a long time. Four members were reported on the sick fund.

## Queen Victoria's Cottage at Kew Gardens.

On July 7 the Richmond Town Council resolved to request the member for Richmond to call the attention of Parliament to the non-compliance with the wish of the late Queen Victoria that the ground surrounding the Queen's Cottage in Kew Gardens should be opened to the public. It was true, Councillor Hasler said, that a path had lately been opened through the grounds, but that was all. [There is plenty of ground for the public to roam at pleasure in the gardens themselves, and as a quiet sanatorium for bird life during the nesting season, and also for wild gardening, we think the director does well to keep visitors from the Queen's Cottage grounds.]

## Echoes from Hamilton.

When the days are darkest and the looming clouds are deepest, oft the silver streaming gleams of sunshine pent up in gloom break out precipitately upon the earth, and dispel the sickly pallor everywhere umbered, in such circumstances, on the face of Nature. It was thus, as the month of June was on the eve of taking its departure. The long timed leaden clouds which obscured the usual genial rays of sunshine, so peculiar to this month, broke suddenly asunder, and, without the least sign or symptom, man, beast, and plant were rushed into a subtropical atmosphere. On two or three occasions the temperature rose to 80deg Fah. in the shade, a rather trying ordeal to pass through after a protracted subjection to a temperature not very much above winter. Pat was not very wide of the mark when he said in reference to June "that he saw a summer like this last winter." But, alas! the change, if drastic, was equally short lived, and all that we have experienced of the present month has been of a very spasmodic character—one day or so good and the other bad or indifferent. To-day (12th) as we write, the outlook is extremely gloomy. The elements pour forth their fury in wind and rain incessantly since early morning, and the air is cold and chilly—a feature associated indeed with the night temperature of the season. But we must not be gloomy, for man was created for a higher purpose. The wells of hope deposited in his bosom amply assure us of that fact, for truly they are commensurate with the springs of life itself. Therefore we, the sons of the soil, must hope, though the days are dismal and the dark impending clouds are threatening, that behind all lies the proverbial silver lining.—D. C.

## National Carnation and Picotee Society.

The National Carnation and Picotee Society will hold their annual show on Tuesday, July 22, in the Drill Hall, Buckingham Gate, Westminster, one to six p.m.

## Success of Dundee Florists.

Roses, in common with other flowers, are a fortnight later than usual this season, and on this account Scottish growers have been unable to attend any of the early Rose shows. On the 11th, however, at Ulverston Rose Show, Messrs. D. and W. Croll, Dundee, were enabled to enter an appearance, and were successful in carrying off second prizes for each of seventy-two blooms, thirty-six blooms, and eighteen blooms, against English growers.

## The Comfort of Canadian Voyagers.

A novel idea has been put into practice by Messrs. Elder, Dempster, and Co., which might well be followed by the railway companies, though the suggestion will probably be considered too Utopian yet. The Beaver liner Lake Ontario, which arrived at Liverpool from Canada on July 13th, had on board a considerable number of passengers, and, on the instructions of Sir Alfred L. Jones, the carriages of the special train conveying the City bound passengers to London from Riverside Station were decorated with flowers, and baskets of fruit were also provided for the consumption of the fortunate travellers.

## Great Hyacinth and Tulip Competition for 1903.

The Royal Bulb Growing Society of Haarlem have offered, and the Royal Horticultural Society have accepted, a grand prize for Hyacinths, and another for Tulips, to be competed for at the Drill Hall, on or about March 24, 1903, as follows:—120 Hyacinths, in pots (single spikes), in forty varieties, not more than three pots of any one variety. Open. First prize, £7; second prize, £5; third prize, £3. 100 pots of Tulips, in fifty varieties, three plants of the same variety in each pot, and not more than two pots of any one variety. Open. First prize, £4; second prize, £3; third prize, £2.

## Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, July 22, in the Drill Hall, Buckingham Gate, Westminster, one to six p.m. At this meeting plants—other than for certificate—can only be shown in very small groups, and only then by pre-arrangement with the superintendent. A lecture on "The Botanic Gardens and Flora of Malta," illustrated by limelight, will be given by the Rev. Prof. Geo. Henslow, M.A., V.M.H., at three o'clock. At a general meeting of the Royal Horticultural Society, held on Tuesday, July 8, seventy-four new Fellows were elected, amongst them being Vicountess Strathallan; Lady Fermoy, Lady Savile, Lady Clementi-Smith, Sir Cecil Clementi-Smith, K.C.M.G., Col. Carruthers, and the Hon. Cecil Campbell, making a total of 826 elected since the beginning of the present year.

## The Agricultural Association of Hungary.

This association, in co-operation with the Pozsony County Agricultural Association, and with the council of the town of Pozsony, holds its second national agricultural exhibition at Pozsony (Hungary, near Vienna), from the 7th to the 14th of September, 1902. The exhibition will be connected with agriculture, wine growing, horticulture, &c., also conferences and excursions. The exhibition will consist of the following six branches:—I. Exhibition of stock (horses, cattle, swine, sheep, dogs, poultry, bee farming, rearing of the silkworm, and on fishery). II. Growing of plants (seeds, exhibition of Wheats, forage plants, geology of the soil, retrospective and collective exhibition). III. Wine growing and farming, wine dressing, pomology, horticulture. IV. International exhibition of agricultural implements. V. Domestic industry: people's industry; exhibition of articles. VI. Exhibition referring to forestry and the chase. Pozsony may be reached from Vienna in an hour on railway. There come trains from Vienna to Pozsony twelve times daily, and two steamers on the Danube daily. Hungarian agriculture in all its branches is in its most developed state in Pozsony (in German called Pressburg) and surrounding counties. Pozsony, with an old castle, the Danube, and the surrounding hills, is one of the loveliest parts of Hungary. Special attention will be given to English-speaking visitors, and English-speaking officials will be present in the exhibition.



## Poisons for Industrial Purposes.

Will you kindly allow me to bring under the notice of your numerous readers the action that is being taken by and on behalf of a number of important traders who are interested in the sale of poisons for other than medical purposes? Agricultural agents, farmers, fruit growers, seedsmen, ironmongers, druggists, and many others are concerned, and to some of these the subject of this letter may not be unfamiliar, while to others, who have not had their attention directed specially to it, it may be both new and interesting as well as important. To put it briefly, the question at issue is the right and the desirability of poisonous compounds required for trading and industrial purposes being sold by other than dispensing chemists and druggists. The latter possess, under the Act of 1868, the monopoly of all such sales, and occasionally the Pharmaceutical Society, acting in their behalf, institutes prosecutions for the recovery of penalties with the object of asserting this monopoly. It is for the purpose of relieving traders of the liability of being proceeded against, and thereby meeting the convenience of the public at large, that an organisation entitled "The Traders in Poisons or Poisonous Compounds for Technical or Trade Purposes Protection Society" has been formed. The society, of which I have the honour to be secretary, was formed in March, 1900, since which date it has been very successful in organising the various traders who are directly concerned in the sale of poisonous compounds for industrial purposes. Upon the eve of the last general election it communicated with most of the Parliamentary candidates, and 90 per cent. of the replies received were favourable to the society's objects. Briefly put, the object is to secure an amendment of the existing law. Effectual and energetic steps are being taken to secure immunity from prosecutions. This is largely due to the great and sustained interest taken in the protection society by its treasurer (Mr. G. H. Richards, of XL All fame). There are many reasons why the Pharmacy Act of 1868, already alluded to, should be amended. In the first place, it is evident, from the preamble, that it was intended more particularly to ensure the safety of the public by insisting that only competent persons having practical knowledge of the properties of poisons should have the dispensing of the same. That is reasonable enough. But in the days when the measure became law there were not in existence the multitudinous packages and bottles of preparations compounded by the manufacturer ready for immediate use for horticultural, agricultural, and other trade purposes, which are now to be met with all over the country. As regards these, the ordinary chemist and druggist has no more practical knowledge than the man in the moon. The manufacturer tells him—and the public at large—by advertisement that this or that mixture, or sheep dip, weed killer or powder, is an excellent remedy for this or that disorder, and the purchaser, like the chemist, takes it on trust for some specific purpose, the chemist being merely the channel through which the manufacturer reaches the customer. There is no skilled practical knowledge of poisons required to dispose of a sealed packet or vessel which the chemist receives from the manufacturer, who alone undertakes the responsibility of declaring that a compound of poisonous articles, of a certain strength, is effective for a certain purpose. The purchaser might just as well buy what he wants from any other tradesman, so far as the skilled knowledge of the chemist is brought to bear upon the article disposed of. Indeed, in most cases it would be distinctly advantageous to the buyer if he went to some person who had practical experience of the preparation required. Take, for instance, the case of an insecticide (such as XL All) containing poison. Would not a seedsman or horticultural agent be more likely to give valuable advice to a purchaser, based upon practical experience, than a chemist, whose principal employment is the dispensing of drugs intended to cure all the ills that flesh is heir to? The same argument applies to sheep dips, weed killers, &c. If there is any risk to public safety involved in the proposed freer sale it is not increased by disposal through a seedsman nor minimised by being handed over a chemist's counter. The new vapourisers and insecticides which have come into such general use in recent years have been invented by members of the horticultural trade, and people who are accustomed to their application are naturally the best advisers of purchasers, not chemists, who know nothing of them beyond the label on each packet. A measure such as is contemplated would also enable photographic requisites containing poison to be sold by others than chemists.

It is to the benefit of traders in all parts of the country that the society to which I have referred is exerting itself, and I am glad to inform you that the reasonableness of its demand has been admitted by the Privy Council, who last year appointed a Poisons Committee to investigate the matter and report on the evidence submitted to them. Already that committee has held three sittings, at which witnesses were heard on behalf of the Pharmaceutical Society on the one hand and our protection society on the other, besides some independent skilled and

departmental witnesses, and there is good reason for believing that the committee may recommend the adoption of a third schedule to the Pharmacy Act, which will provide where poisonous compounds are sold in sealed packages for agriculture, horticultural, disinfecting, and other trade or technical purposes by persons other than chemists, who shall be duly licensed, and, being respectable and responsible individuals, they shall be lawfully entitled to sell such articles. It must be understood, however, that this desired result can only be obtained by the traders concerned bestirring themselves, and bringing pressure to bear upon the members of Parliament in their respective districts, pointing out to them the desirability of the Government being urged to bring in an Amendment Bill for the purposes above indicated. For every fully qualified chemist there must be a large number of agricultural agents, horticulturists, seedsmen, oil and colourmen, ironmongers, hardware dealers, and the like who would benefit by an amendment of the law which enabled them to sell, without fear of prosecution, many articles in great demand in town and country alike. I therefore hope that this trade protection society will receive their cordial support in its attack upon a monopoly, and will attract the continued and extended interest of all those who wish to see that monopoly broken down. If other information is desired on this important subject it will be readily furnished by—Yours faithfully, THOS. G. DOBBS, Secretary, 24, Sansome Street, Worcester.

## Conservatory Walls Clothed with Ferns.

I think if more of our amateur friends knew how easy it was to establish Ferns on the ordinary upright brick walls of conservatories or greenhouses many would be anxious to do so. I enclose a photograph of the well-known *Adiantum Capillus-Veneris*, which had been placed on the wall of a conservatory in the gardens of which I then had charge (Clarence House, East Cowes) just two years previous to the taking of the photograph. I thought it might interest the readers of the Journal if I briefly describe the method of procedure to obtain success.

It must be remembered that all Ferns producing rhizomes such as the one mentioned above are far more suitable for the purpose, as under proper treatment they attach themselves to the wall, and hold their own without assistance. Select plants growing in any size of pot, from a 48 (5in) upwards, and turn them out if possible during the last week in February or the first week in March. Lay them on their sides, and cut off the upper portion or crown to a depth of about 2in with a sharp dinner-knife or similar instrument; it will then be in just the condition for placing against the wall, flat, with just sufficient root action to give it a good start.

Then comes the question of making fast to the wall, which is best done by means of 14 gauge galvanised wire, made fast by small staples across the crown of the plants in a neat style, so that it would scarcely be visible once the fronds started to grow. According to the size of plant or crown so the distance apart of plants should be determined. For instance, the majority of the plants we put on in this fashion were turned out of pots averaging 10in in diameter and placed on the wall 2ft apart, which became completely furnished in about two years. After the plants have been made secure mix up two parts of clay with one of cow manure, encircling the outside of each crown, which, if kept moist, will give the roots a good chance of adhering to it, the cow manure acting in the double capacity of preventing the clay from cracking and acting as a mild stimulant to the plant when growth commences.

The only necessary precaution to be taken afterwards is never to allow the wall to become dry. This can be kept moist daily either by syringing or, if it be a low wall, by running along a small spout can at the top and allowing the water to run down to the bottom. Or a better plan still (if the grower has a water main at his or her disposal) is to fix a small perforated pipe the whole length of the wall, turning it on for about a quarter of an hour to saturate the whole. The effect produced in a good structure used for general plant growing, and the valuable aid which this variety renders when the *Cuneatums* are resting, previous to starting in the spring, cannot be over-estimated. The whole length of wall covered in the photograph, including two ends and side, was 75ft.—C. MARTIN.

## Improvements in Hardy Plants.

(Concluded from page 27.)

Among the *Heucheras* there is a possibility of very great improvement. A crimson *H. erubescens* would make a charming plant, and as these are easily crossed and the results quickly seen would be a nice family for some impatient enthusiast to take up. *H. zabeliana*, a Continental introduction, is one of the first hybrids we have, and a very good plant it is. *H. sanguinea* appears to be degenerating. Even the variety *splendens* does not come up to the standard of what I grew in my private garden at Tottenham. Originally there were six plants—one died on the road—brought by Dr. Murray from Lower Mexico, which he gave to me. The description he gave of this species growing wild was of a plant 3ft or 4ft high, with flowers more than double the size, and scores of branching spikes emanating from quite small clumps, and when he saw them at Tottenham for the first time he was more than disappointed, and did not consider the plant worth the trouble he had bestowed upon it. The spikes he saw at Tottenham were far more beautiful than those usually seen in English gardens.

The *Iris* present a fine field for the hybridiser, although they are not so easily managed as one might suppose. They have always been popular. We have had a few new varieties of *Germanica*, a good many new varieties of the *obliquata*, and a few hybrids of *Max Leichtlin* and *Sir Michael Foster*, and a few others are the nett proceeds of the last twenty years. There has never been much done in the way of hybridising, *Max Leichtlin* being one of the first. One of the best of his was *Warei*, a cross between *I. susiana* and one of the *Germanica* sections, but he does not appear to have been very successful with them. *Sir Michael Foster* has many hybrids, some most charming, and he appears to be crossing everything. His *monspur* sections are good, the result of crossing *Monnieri* and *spuria*. *Parsam*, a cross between *paradoxa* and *sambucina*, is very pretty, and there are many others that we know little about. I had almost forgotten the *Iris Kämpferi*. A marvellous change has taken place in these since the late Baron von Siebold introduced his first set from Japan. These had quite small flowers, and were not worth growing by the side of those now in cultivation. I believe the first information we had of these large ones was at Tokenhouse Yard, when Messrs. Protheroe and Morris offered some thirty or forty clumps, one or two plants of each variety, accompanied with the usual Japanese drawings. These caused quite a sensation, and realised several pounds a clump. The Japanese were not slow in sending over many more, and for the last twenty years a regular trade has been done in them, but I do not think we have any more varieties now than then. *Iberis*, *Inulas*, *Lathyrus*, *Linum*, and *Linarias* we must pass. All are good popular families, from which improved varieties could be obtained.

The *Megasea* has received a fair share of attention, Mr. Smith of Newry, having raised a great number of seedlings, some very interesting, but there are not enough whites and light shades of colour. Unfortunately, this family has never been very popular with the public.

The Evening Primroses present many opportunities for hybridising and selection. Sooner or later we shall have some one finding a white *microcarpa* or *fruticosa*, both of which would be eagerly sought after, and if whites, why not roses and reds?

Has anyone seriously attempted to cross this family? I have never heard of one, and I feel sure they would pay well for a little attention.

I must not pass the *Pentstemons* without mentioning *P. heterophylla*, a lovely Californian species of a beautiful blue colour. I see no reason why we could not get blue ones among the hybrids, seeing both are very similar in growth.

*Potentillas*.—What a wealth of colour we have in the hybrid *Potentillas*. The combinations are marvellous, but all spoilt by the lazy habit of the plant. Could we not obtain a new set, less rampant in growth and erect? If we could it would be a great boon, for we have no other family possessing so much brilliancy of colour as these.

*Scabiosa caucasica* is now producing a nice range of colour, and, as they can be propagated by division, will become very useful. Unfortunately, they are slow in increasing, and it will be some years before we see much of them. Some of the new shades are delightful.

The *Spiræas* are an important family and great favourites, and there is no question that many improvements can be made in them, especially in point of colour. A coloured variety of *S. japonica* or *S. Aruncus* would cause quite a sensation. I would not say they can be obtained, but I know they are well worth trying.

We have a good pink variety of *Spiræa gigantea*, and I remember having offered to me a bright pink variety of *S. filipendula*, but such a fabulous price was asked that it was impossible to secure it. Twenty-five years ago this class of plant was at a very low ebb. What became of it I never knew, but I can see it in my mind's eye now, and should like an opportunity of obtaining it.

*Sedum spectabile* contains many points of great merit, and if we could get a batch of seedlings, improvement only in colour would be a great commercial success.

The *Statice* are becoming more popular now attention has been given to selection, &c. In *S. limonium* we have a very variable species, varying from the purest white to all shades of blue and pink, with dense heads of flower 2ft across. The individual flowers are smaller than those of *S. latifolia*, but far more graceful for cutting. These are much sought after for this purpose.

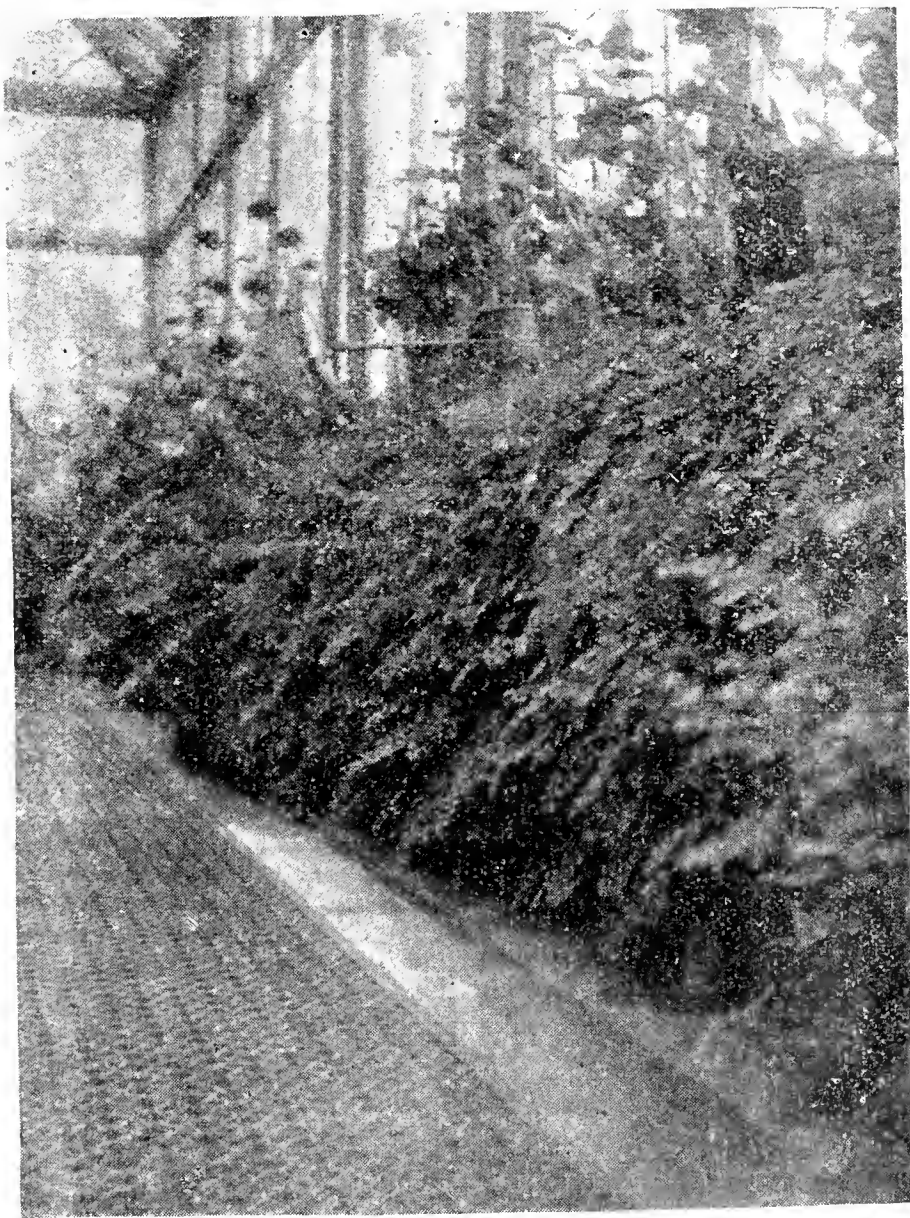
There are hundreds of other families that could be mentioned, all of more or less interest, and from past experience with other families feel sure similar

results could be obtained. It will be useless for anyone to take up this matter unless it is done systematically, keeping to the object in view and working to obtain it.

There must be nothing left to chance, as the cost of planting out, say, 1,000 *Aster* chance seedlings is great, especially if you get no results; whereas twenty carefully selected might produce one or two worth keeping, if only for further trial. One is not going to get novelties the first time of asking. It is a question of close watching and perseverance, and if only one or two are taken up by anyone here to-night with an idea of improvement, my work this evening will not have been thrown away.—(A paper read by Mr. Amos Perry, of Winchmore Hill, London, N., before the Horticultural Club.)

### Nostell Priory, near Wakefield.

"Since you visited here," writes Mr. Easter, "our old range of glass houses is all cleared away, and the new range in its place is nearly completed, by Boulton and Paul. There are eight houses in all—two Palm houses, two Melon houses, forcing house, vinery, Carnation, and plant house."



Conservatory wall clothed with Ferns.



## Cypella Herberti.

The Cypellas, with few exceptions, are not cultivated in gardens, partly because some of the Irises are showier and probably easier to manage than the Cypellas are, and also because the claims of the latter are not sufficiently emphasised in the Press. The species we illustrate in this issue on page 63 is recognised as one of the best, and is more generally grown. The Iris-like flowers are "yellow, varying in shade to a deep chrome tint." They are sparingly produced, however, and their beauty-excellence may not be regarded as sufficiently satisfying to induce a liberal addition of this species. Cypellas are half-hardy, bulbous plants, and may be included along with Hypoxis, Sparaxis, Freesias, Anogonanthus, Scillas, and such other plants which are not generally hardy enough to be left out of doors. They thrive in a light soil. C. Herberti flowers in July.—F.

## Hardy Flower Notes.

Almost all the Acænas, or New Zealand Burs, are desirable plants for the rockery, though it must be said that several are of an aggressive habit if left alone and permitted to ramble at will. I often wonder, however, that they are so little used as carpeting plants for summer planting, for which they are well adapted on account of the close, creeping habit of so many of the genus and the pretty hues some of them present. We have in A. Buchananii one of these, and one, too, which has been but little grown in gardens. For the rock garden it is a little gem, with its pea-green foliage, in which its charm consists. "Pea-green" is the nearest one can come to the precise shade, but it wants to be seen to be appreciated. The flowers are inconspicuous, as are the "burs," or fruits. It is of slightly trailing habit, and it seems to like a little moisture and also to thrive well in shade. It is a native of New Zealand, and is quite hardy. By the way, I recently received this Acæna under the name of A. Berteri, and promptly notified the sender, who said he had it from a good source. This I do not doubt, but the name Buchananii is, I have good reason to know, the true one of the plant of which I speak.

### Achillea mongolica.

Not a new plant, this Milfoil is yet one which ought to be grown in many gardens where it is yet unknown because of the value for cutting of its charming single flowers of pure white, as well as for the beauty of the whole plant as cultivated in the borders. The foliage in itself is neat, and when to this is added the summit of its beauties in the shape of flowers we have a plant worthy to take a place in the most select border of hardy flowers. It is of neat habit, too, its height of about a foot and a half only enabling it, as a rule, to dispense with tying in sheltered gardens, a benefit in the case of an elegant plant like this. It will grow in any common soil, but it ought to have a sunny position. A. mongolica is perfectly hardy, and may be raised from seeds or increased by divisions. It is easily obtainable from most good hardy plant nurseries.

### Mertensia sibirica.

In this pretty flower, introduced so long ago as 1801, we have an instance of a plant much prized at one time sinking, with so many other hardy flowers, into neglect, and now once more sought after and appreciated. That it is now prized is due, however, not to any gaudy colouring or monstrous blooms. It is, on the contrary, a flower liable to be overlooked by the casual visitor to gardens—the one who strolls along and merely glances at a flower without taking true notice of its character. There is in the colouring of its leaves and flowers a kind of subtle harmony instead of a contrast, which tends to prevent the colour of the blooms striking the ordinary visitor to a garden. If, however, the flowers themselves are examined, then the pretty colouring, sometimes described as blue, sometimes as heliotrope, is unreservedly praised. I do not know that either of these terms are expressive enough, for there is about it some of the lustre on the neck of a blue pigeon, such as one sometimes sees in lustre glass or silk. Then the arching habit of the branches is graceful, as well as the drooping of the flowers in their tube-blossomed cymes. In addition to the ordinary form of Mertensia sibirica, there are also two pretty varieties, named respectively alba, which has white flowers, and atro-cerulea, which had darker blue blooms. This Siberian Mertensia grows from 6in to 18in in height, and flowers generally from May to July. One advantage it possesses is that it likes shade and it will grow in common soil, though I find it prefers a moist, peaty one. In full sun it is least satisfactory, especially if the soil is dry and sandy.—S. ARNOTT.



## The Judas Tree.

Regarding your note in this week's issue on Cercis siliquastrum, there is a good specimen here (Glliffaes Gardens, Crickhowell, Brecon) quite 12ft high.—J. R. Ecob.

## Eucalyptus globulus in the South.

You will please find enclosed branches and flowers of Eucalyptus globulus (or Blue Gum tree). It is not a common occurrence to be seen in bloom in this country, and I should like your opinion, or some of your correspondents, on the subject in your Journal. The plant is about thirteen or fourteen years old, is over 30ft high, and it is the second time it has bloomed. You will also observe that on the young shoots flower-buds are forming, which will come in bloom next year.—T. J. POLKINGHORNE, The Gardens, Bodmin, July 14, 1902.

## Gardeners' Bothies.

There has lately appeared in the Journal, and also in some of its contemporaries, a deal of sentimental writing about bothies and bothy life. Some writers went so far as to describe bothies as moral nuisances. Not having read much of what has appeared in print on the subject, I am not going to discuss it in any shape or form. But herewith enclose you a photo of the bothy at Nostell Priory Gardens, which accommodates five hands, and a woman is kept to attend to it and the men. Where such is the case they are very comfortable, and much appreciated by those occupying them, and I consider the bothy an indispensable adjunct to any pretentious garden establishment, and in some localities I cannot see how they could be dispensed with as some seem to think.—JOHN EASTER, Nostell Priory Gardens.

I quite agree with your correspondent, Mr. R. Russell, in his remarks in your valuable Journal of July 3, and as I have lived both in bothies and in lodgings, and for years I have had young men working under me living in bothies, I claim some experience in that mode of life. One of the advantages in living in or near the garden is that there is a much better opportunity for improvement than is usually found in the sort of lodgings that a young gardener can afford to pay for. When I lived in lodgings in Edinburgh I had my food prepared for me and my room put straight; but I was not supposed to be in my lodgings except for meals and to sleep. Now, where was my opportunity for study, even if I had the books which I could not afford to purchase out of 12s. per week? When I have had to engage young men for the garden, in nearly every case the first question asked of me was, "Is there a bothy?" and that generally settled the engagement. Therefore, I think if there were a poll taken of young gardeners, the majority would be for the bothy, as there is a much better opportunity to study for those who are inclined to do so, and for the collecting of botanical specimens, which every young gardener ought to do, in order to make himself familiar with every plant he may come across. There is nothing more humiliating than when a gentleman asks his gardener the name of a plant and he has to say, "I don't know."

One thing I should like to see more in practice, which would be of great advantage to young men, and that is the naming of plants in our public gardens. It would not only be a benefit to the profession, but interesting to the public generally. I visited a so-called botanic garden in the Midlands not long ago, in the hope that I might learn something; but I could see nothing to learn from, as there were no labels visible, so I concluded they were all in the offices having their spring cleaning done. It was not much loss to me, but for young men desirous of qualifying for the battle of a horticultural life it is an injustice to them, as there are not many young men in the country that have an opportunity of going to Kew or Cambridge where they can run and read the names and orders of plants unknown to them. It is no easy task for a young beginner in botany to find out the names of plants that he does not know, even if he has a Loudon or a Lindley by him, whereas if our public gardens were better supplied with labels it would be a boon and a blessing to bothy men, and give them a better opportunity of improving themselves in their leisure hours, which would be much more profitable in

the long run than making a study of sporting life. And I should like to impress upon young men in the garden that when they seek for an appointment as head gardener they will not be asked if they know the name of the horse that is to win the Derby; but rather if they have a thorough knowledge of their profession in all its branches; and that knowledge can be acquired by a perseverance and study in a well conducted bothy in the quiet of a gentleman's garden much better than in a lodging-house where all sorts and conditions of men are put up.—D. DONALD.

### Rose Frau Karl Druschki.

We are interested to read your appreciation of this Rose as shown on the 8th inst., and as the first exhibitors of it, at the meeting of the Royal Horticultural Society on the 8th April last (although we did not enter it then for an award of merit), we think that your readers may like to know something of its history. It was raised by Mr. P. Lambert, of Trèves, in Rhenish Prussia, as the result of a cross between Merveille de Lyon and Caroline Testout, and made its début at the show of the German Rose Association at Trèves in June, 1900, when it was named after the wife of the esteemed president of the association on that occasion. Our Mr. Arthur William Paul, who attended the show in question in the capacity of a judge, saw the Rose also growing in the grounds of the raiser, and was thus enabled to correctly estimate its merits on the spot, and as a result we secured an early supply of plants. It is without doubt one of the most valuable white Roses; the flowers are large, with beautifully-shaped petals, while the semi-climbing habit of growth and freedom in blooming render it most effective for garden decoration. As a white forcing Rose it is excellent.—WM. PAUL AND SON, Waltham Cross.

### Culinary Peas.

Perhaps a slightly lengthy reply to "N. N.'s" kindly criticism made on page 557 of last volume may be permitted, as the subject is one of prime importance. I may say I am not at all surprised that "N. N." should hold on to Ne Plus Ultra against all others, especially as he cultivates a carefully selected strain, and no one I am sure would venture to dispute the sterling good qualities of that variety. At the same time, if he continues to grow Autocrat, and treats it according to its individual wants, I have no hesitation in saying he will find it the better variety. Two years is too short trial. How long I have grown Autocrat I cannot well say; but Mr. Ward, writing in the "Gardeners' Chronicle" last winter, mentions having seen it here seventeen years ago, a proof that I ought to know the good and bad qualities of the Pea by this time. I am quite at one with "N. N." as regards the varying effects produced by different soils, and, I might add, climate too, though I see Mr. W. P. Wright, Kent, the other day named Autocrat as the best late variety; so that we may conclude it succeeds in a widely varying climate too. But in addition to these items, there is another feature of this Pea it is essential to study, which I may be allowed to call its personal peculiarities. I discovered long ago that Autocrat and Ne Plus Ultra required, in one point at least, different treatment. The latter can be sown a week later than the former, and if they are sown both together at the latest dates suitable to Ne Plus Ultra, Autocrat most certainly will fail. I, in fact, sow it twice, at intervals of ten days, that is for late gathering, and its habit of flowering continuously secures that plants from the earliest sowing continue bearing as long as those sown later.

The main drawback to securing late Peas here are late autumn frosts. Annually the late Peas are cut down bearing abundant crops of pods, as well as quantities of bloom, and in the treatment of this crop it is of the utmost importance to produce a hardy plant. It is a marked peculiarity of Peas that when young in spring they come unscathed, or little damaged, through a frost that annihilates them in autumn. Another point about early Peas is that it is decidedly advantageous to employ manure for the crop in order to carry it successfully through the dry, hot weather they have to encounter when podding. In the case of late Peas I fail to discover any good reason for applying manure in any form to the soil. Its effect is to cause a stronger and less hardy growth, which is in this case just what is not required. If the seeds are sown a little deeper than usual, to insure against root dryness, that is generally sufficient, though in a hot, dry season like last year, watering could not be avoided in July. As to depth of soil, that is a consideration of much importance, but the seed should not be placed on a loose substratum. If the ground is prepared for the crop just previous to sowing, and the soil is at all light, then it ought to suffer compression first. This, too, is an aid to sturdy growth.

Thin seeding is no doubt all-important. I sow in double lines, with the seeds at 3in apart in the lines. As to tall Peas,

I feel so little pleasure in them, that aspiring tops are invariably switched off by means of a hook. In addition to preserving them in a desirable medium as to height, this treatment has also the effect of causing the Peas to swell and to induce the production of a larger quantity of bloom than occurs with Peas left to climb unchecked. There is just another point I wish to indicate. Whoever wishes to have late Peas in quantity sufficient to produce one or two dishes daily must largely increase the sowing beyond that usual for summer uses. I have 350 yards run of Autocrat coming on for late use, which allows 50 yards for each day, and a week to elapse before it is again gathered. Great care in gathering is needful, because if any but full swelled pods are gathered, the supply will be certain to suffer later. It is, moreover, a commendable practice, should frost appear imminent, to gather as many full pods as possible and place them in the fruit room or other perfectly cool building until required. If the frost does no harm, nothing is lost; while, on the other hand, if sufficiently hard to destroy the crop, the supply will be insured for a week or a fortnight longer.—R. P. BROTHERSTON.

### Sir Thomas More's Mulberry Tree.

The daily journals have noted the fact that Beaufort Street, Chelsea, built early in the reign of George III., which has some curious old-fashioned gardens, is now doomed. Amongst the trees and shrubs to be removed is "More's Mulberry Tree." Certainly this street crosses the site of Beaufort House and part of its gardens, but it is doubtful whether the tree dates back to the days of More. Probably it is a descendant of one existing in the reign of Henry VIII. There is, or was, another old, twisted Mulberry in the grounds attached to the Clockhouse, which had also once belonged to the Beaufort House Gardens, and contained a "herbary," with various interesting plants and fruit trees. In the garden of Chelsea Rectory there is another ancient Mulberry—indeed, the village was formerly famous for this tree, and over at Chelsea Park about 2,000 were planted by James I., a few of which yet exist. It has been suggested that the Romans brought the Mulberry to Britain, but we have no mention of it in books till the sixteenth century. The oldest trees are (or were) three at Sion House, Middlesex, and one at Canterbury, Kent, these have been estimated at 300 or 350 years old. Some assert the Mulberry may attain to the age of 400 years. It is singular to how many of these trees has attached a tradition that Queen Elizabeth sat under them and regaled herself upon their fruits.—C.

### Points about Vines.

In his remarks under the heading, "Seasonable Hints on Vines," page 24, July 10, "H. D." states the following: "In case of a bad attack of red spider which is general throughout the house, a strong fumigating with XL All on two successive nights will usually kill every red spider present." This is quite the contrary to my experience. I have frequently vaporised Melons with XL All compound at double strength to that recommended on bottle, also Black Hamburg Vines at extra strength on successive nights, but I was never able to kill red spider with this otherwise indispensable insecticide. I found also that Adiantum cuneatum, A. Farleyense, Muscats, and Lady Downe's Vines are very seriously injured if vaporised with XL All nicotine compound. Even when the leaves are fairly ripe on these varieties of Grapes, they will curl, and the edges for an inch in depth will dry up. Anyone who has to fill vineries containing these two varieties of Grapes with Chrysanthemums in October can easily put my assertion to the test, if they vaporise the Chrysanthemums in them to destroy green fly, which generally infests these autumn flowering plants after being housed. I had some young Crotons in a propagating case on which were a goodly number of red spiders. In the case was, perhaps twenty cubic feet of space. I put enough XL All compound in the vessel to kill green fly in a 1,000 cubic feet house or pit, and strange though true, the red spider was still alive and frisky when examined next morning. I should be glad if "H. D." would state the size of his vineries and quantity of XL All used, in which he caused red spider to succumb so easily.

A remarkable fact which may interest some readers may be worth noting, and prove that spiders of a larger size are also difficult to kill. After clearing out the early lot of Melons from some heated pits last month, and as a precaution against red spider being present when replanting immediately, we burnt a quantity of flowers of sulphur on some hot coals taken from the boiler fire, and quite filled the pits with the fumes. The same evening, on lifting up the lights, there were two large spiders in their webs in the corners of the brickwork as full of life and vigour as possible. I think the fumes would have suffocated any human being in fifty minutes.—A. JEFFERIES, Moor Hall Gardens, Essex.



## Societies.

### Wolverhampton, July 8th, 9th, and 10th.

Typical King's weather characterised the opening day of this popular Midland horticultural exhibition, and since its inception, fourteen years ago, its popularity has increased, with also a corresponding financial prosperity. The aggregate profits have realised a sum of £6,407 5s. 1d., and the Committee of Management have handed to the Parks and Baths Committee of the Corporation about £4,000 for additions and improvements at the East and West Parks. The prize money was increased to £800, and the entries on the present occasion numbered 736, a record number, the highest previously being in 1899, when there were 734. The exhibits were staged in seven large marquees, and, viewed as a whole, the show was probably the finest ever held at Wolverhampton. It was held in conjunction with the Art and Industrial Exhibition. The public luncheon, held in Connaught Restaurant, belonging to the latter, was presided over by the Mayor (Councillor Plant), and the toast to the judges was responded to by Mr. Owen Thomas and Mr. Richard Dean in apropos sentiments.

The individual features of the show were so numerous and meritorious that it would be almost invidious to particularise. The exhibits, however, as a whole, of hardy garden flowers contributed by competitors and the trade might readily claim the foremost position. The silver challenge trophy, value £25, and cash £5, was won outright by Mr. J. H. White, Woreester, with a magnificent display of cut flowers and plants. Sweet Peas formed another very great attraction, and more especially the splendid collection of the veteran Mr. Eckford. There was an evident marked improvement generally in the arrangement of the Sweet Peas in the vases and glasses, and a decided leaning towards using own foliage or otherwise instead of Maiden-hair Fern fronds. Prior mention of the foregoing subjects does not in the least detract from the excellence of the grand display of Roses. Considering the incidence of the weather, the quality of the Roses on the whole proved superior to anticipation.

Fruit was more numerously represented than usual, excepting, strangely, Strawberries, there being no exhibit in the special competitive class, and only one or two dishes (Royal Sovereign) in the collections of fruit. The black Grape section was very well represented, more especially by the Madresfield Court variety, notably by Mr. S. Barker, gardener to the Duke of Newcastle, Clumber Park, Notts, who had a pair of very fine bunches, with large even-sized berries beautifully finished, in competition for the prizes for any black variety. Unfortunately, however, considerable damage was occasioned to one of the bunches by the accidental upsetting of the box during transit, thus putting the exhibit "out of court," but the judges signified their appreciation of the evident high culture by giving an extra award. Several examples of white Grapes were fairly well staged but the Museat of Alexandria variety—though fine in bunch and size of berry—lacked, probably owing to the long absence of sunshine, that desideratum, the amber colouration, and in this respect were eclipsed by such as Buckland Sweet-water. Peaches and Nectarines were unusually good, both in size and colour. Figs also fine, whilst Melons made a brave show.

Vegetables were numerously staged, and their quality evoked much admiration amongst the visitors.

The trade element, as usual, was greatly in evidence, more especially in regard to plants and cut flowers. Messrs. James Veitch, Chelsea, had an excellent exhibit of their plant specialities. Messrs. Webb and Sons, Wordsley, were represented by an attractive arrangement of Sweet Peas, Gloxinias, *Lilium Harrisii*, Begonias, and hardy garden flowers. Messrs. Richard Smith, Woreester, also contributed a fine exhibit of hardy garden flowers, &c. Messrs. Dickson and Co., Chester, displayed a good assortment of hardy flowers, &c. Messrs. J. Hill and Sons, Lower Edmonton, contributed almost an unique collection of exotic Ferns, forming a highly interesting feature in the show. Messrs. Jarman and Co., Chard, displayed a fine assortment of Sweet Peas, Roses, Begonias, &c. Messrs. George Jackman and Co., Woking (who were new exhibitors here), had a new assortment of Delphiniums, Carnations, and other flowers. Messrs. Hinton and Co., Warwick, a fine collection of Sweet Peas. Mr. John Forbes, Hawick, a superb collection of herbaceous Phloxes and Pentstemons. Messrs. Dobbie and Co. sustained their reputation with a grand exhibit of Sweet Peas, Violas, and Fancy Pansies. Messrs. Blackmore and Langdon, Bath, submitted a superb collection of Begonias. Mr. Bason, of Finchfield, an excellent assortment of Sweet Peas. The Violas of Messrs. Pattison, Shrewsbury, maintained this firm's reputation. Hardy garden flowers were well staged by Messrs. Hewitt, Solihull, Birmingham; whilst such more local growers as Mr. R. Lowe, Messrs. Tom B. Dobbs, and Mr. John E. Knight, all of Wolverhampton, materially contributed with their respective exhibits to the enhancement of this grand

exposition of horticultural produce. Mention also in this respect must be made of the fine group of Caladiums, white Lilies, and Begonias contributed by Mr. Webster, curator of the West Park, and to which a gold medal was awarded. Much credit is also due to him for beautiful designs of carpet bedding and other bedding arrangements, contrasting so pleasingly with the floral contributions beneath the exhibition marquees. Much credit was due to Mr. Barnett, the courteous secretary, and his colleagues for the efficient arrangements of the exhibition.

### The Competitive Exhibits.

Commencing with the schedule of prizes, groups of plants arranged for effect (open to all) come first, and, as might have been expected, Messrs. Cypher and Sons, Cheltenham, were accorded first honours for one of their well-known artistic effects, and so similar have they of late years been in character that to readers of the Journal a detailed description here would prove a superfluity to past readers; sufficient to say that the recent display compared favourably with some of their best former ones, and a similar remark also applies to that of Mr. J. V. Macdonald, gardener to H. Kenrick, Esq., Edgbaston, and who has more than once closely rivalled his formidable antagonists. The third position was accorded the undaunted Mr. W. Vause, Leamington Spa, and whose exhibit lacked comparative floral colouration.

Messrs. Cypher, as usual, were again to the fore with a fine complement of sixteen stove and greenhouse plants (first prize £20), chiefly notable being huge specimens of *Phenocoma prolifer* Barnesii, *Stephanotis floribunda* (very fine), *Statice intermedia*, *Ixora Williamsii*, *Dracophyllum gracile*, *Erica ventricosa*, *Bothwelliana*, *Ixora regina*, *Erica Candolleana*, *Statice profusa*, *Bougainvillea glabra* (fine), *Codiaeum Montfontainensis*, *Codiaeum Chelsoni*, and four large Palms in variety. The second prize was accorded Mr. W. Vause and the third Mr. W. Finch, Coventry, but neither were up to their usual standard of merit. There was only one exhibit in the class for a collection of Orchids, the second prize being awarded to Messrs. Cypher. Exotic Ferns were very well exhibited by Mr. J. V. Macdonald and Mr. R. Sharpe, gardener to H. Lovatt, Esq., Low Hill, Bushbury, the prizes falling as in the order named.

For twenty specimen plants in pots not exceeding 8in Messrs. Cypher were placed first; second, Mr. H. Blakeney, gardener to the new baronet, Sir A. Muntz, M.P., Rugby; and third, Mr. J. V. Macdonald.

For twelve plants, six in bloom, Orchids excluded, Messrs. Cypher and Mr. W. Vause were the respective winners. The winners for a collection of Begonia in pots were Mr. F. Davies (Pershore), Mr. T. G. Baker, and Mr. J. V. Macdonald, all with meritorious examples.

Roses were naturally one of the leading features. For seventy-two distinct varieties the coveted honours fell to Messrs. F. Cant and Co., second Messrs. B. R. Cant and Sons, third Messrs. Harkness, fourth Messrs. D. Prior, and extra prize to the King's Acre Nurseries, making altogether a grand display, and including many of the newest varieties extant.

For forty-eight blooms, distinct, Messrs. B. R. Cant were to the fore, and Messrs. Harkness, Prior, and Townsend (Worcester), as in order named. For eight distinct varieties Messrs. B. R. Cant scored with Frau Karl Druschke, Lady Mary Fitzwilliam, A. K. Williams, Gustave Piganeau, Mr. John Laing, Mrs. Cocker, Ulrich Brunner, and Suzanne Marie Rodocanachi; second Messrs. F. Cant and Co., third Mr. Prior, and fourth Messrs. Harkness. For twelve bunches with foliage and buds as cut from the plants, any varieties, in vases, Mr. G. Prince, Messrs. F. Cant, and Messrs. J. Townsend were the respective winners, making altogether an effective display. For twenty-four distinct varieties by exhibitors not included in the class of seventy-two varieties—first prize £4 (including special prize of two guineas offered by Alderman Craddock)—Mr. G. Prince, Messrs. Perkins and Sons (Coventry), and Messrs. Townsend (Worcester) were the winners as in the order named. In the class for twelve blooms distinctly named new varieties of the last three years—first prize a gold medal value £3 and cash £2—Messrs. B. R. Cant led, second Messrs. F. Cant, and third Messrs. Perkins. Messrs. B. R. Cant's varieties were Liberty, Bessie Brown, Mamie, Ulster, Frau Karl Druschke, Rosslyn, Exquisite, Papa Lambert, Mrs. Cocker, Mrs. Edward Mawley, Duchess of Portland, and Mrs. B. R. Cant.

For twelve dark Roses, one variety, Messrs. B. R. Cant won with comparatively fair blooms of A. K. Williams; second, Messrs. D. Prior; and third, Messrs. F. Cant, with the foregoing variety. For twelve light Roses, one variety, Messrs. T. Townsend, D. Prior, and F. Cant were the respective winners with Bessie Brown.

For twelve blooms of Tea Roses, distinct, Mr. G. Prince was the victor with Mrs. Edward Mawley, Comtesse de Nadaillac, Souv. d'Elise Vardon, Bridesmaid, Maman Cochet, Madame Cousin, Souv. de S. A. Prince, Mons. Furtado, Catherine Mermet, Madame de Watteville, The Bride, and White Maman Cochet.

The second prize was awarded Messrs. D. Prior and Son. For six vases of distinct varieties of Sweet Briars, not more than seven trusses in a vase, Mr. G. Prince was placed first, Messrs. Perkins second, and Messrs. Townsend third. For nine distinct varieties of Teas and Noisettes, to be staged in nine vases, seven blooms of each, Mr. G. Prince was placed first with *The Bride*, *Madame Cusin*, *Souv. de S. A. Prince*, *Bridesmaid*, *White Maman Cochet*, *Souv. d'un Ami*, *Innocente Pirola*, *Maman Cochet*, and others; the second prize to Messrs. Townsend with unnamed varieties.

Bouquets were as a whole well shown, and, in fact, the most uniform display of the kind ever presented for adjudication at Wolverhampton. For a bouquet for the band Messrs. Perkins, Leamington, won the coveted prize with an extremely graceful arrangement of *Odontoglossum crispum* and *Lælio-Cattleya* sprays, and *Asparagus* fringing. The second prize was awarded to Messrs. Jenkinson and Sons, Newcastle, Staffs, for a considerably larger and heavier arrangement, composed of *Odontoglossum crispum*, two varieties, and *Epidendrum vitellinum*, with *Asparagus* fringing; third, Messrs. Tucker and Son, Oxford. For a bridal bouquet Messrs. Jenkinson secured the first prize with an exquisite composition of *Odontoglossum crispum* and pure white

days, the first prize was accorded Mr. T. G. Baker; second, Messrs. Harkness and Son.

Prizes were offered for a group of plants in flower, to consist of one species only to a group. The first prize was awarded to Mr. J. V. Macdonald for a showy lot of *Hydrangea Hortensia*; second, Mr. R. Sharpe, gardener to H. Lovatt, Esq., for a beautiful display of *Malmaison* Carnations; and third, Mr. T. G. Baker, Waterdale, Compton, with *Show Pelargoniums*. It may be remarked that the Carnation group held the highest position in the visitors' estimation, for obvious reasons.

For an arrangement of Sweet Peas for effect, gold, silver, and bronze medals were offered. Messrs. Jones and Son, Shrewsbury, won the gold medal, and Messrs. Gilbert and Sons, Bourne, the silver medal; no other competitor.

For eighteen bunches of Sweet Peas, in distinct variety, the first prize fell to Mr. E. Watkins, gardener to R. Piazzani, Esq.; second, Messrs. Jones and Sons; third, Messrs. Gilbert and Sons; commended Mr. W. Marple, Parkridge. For six bunches of Carnations, not less than three varieties, Mr. J. P. Leadbetter, gardener to A. Wilson, Esq., Tranby Croft, Hull, won the first prize.

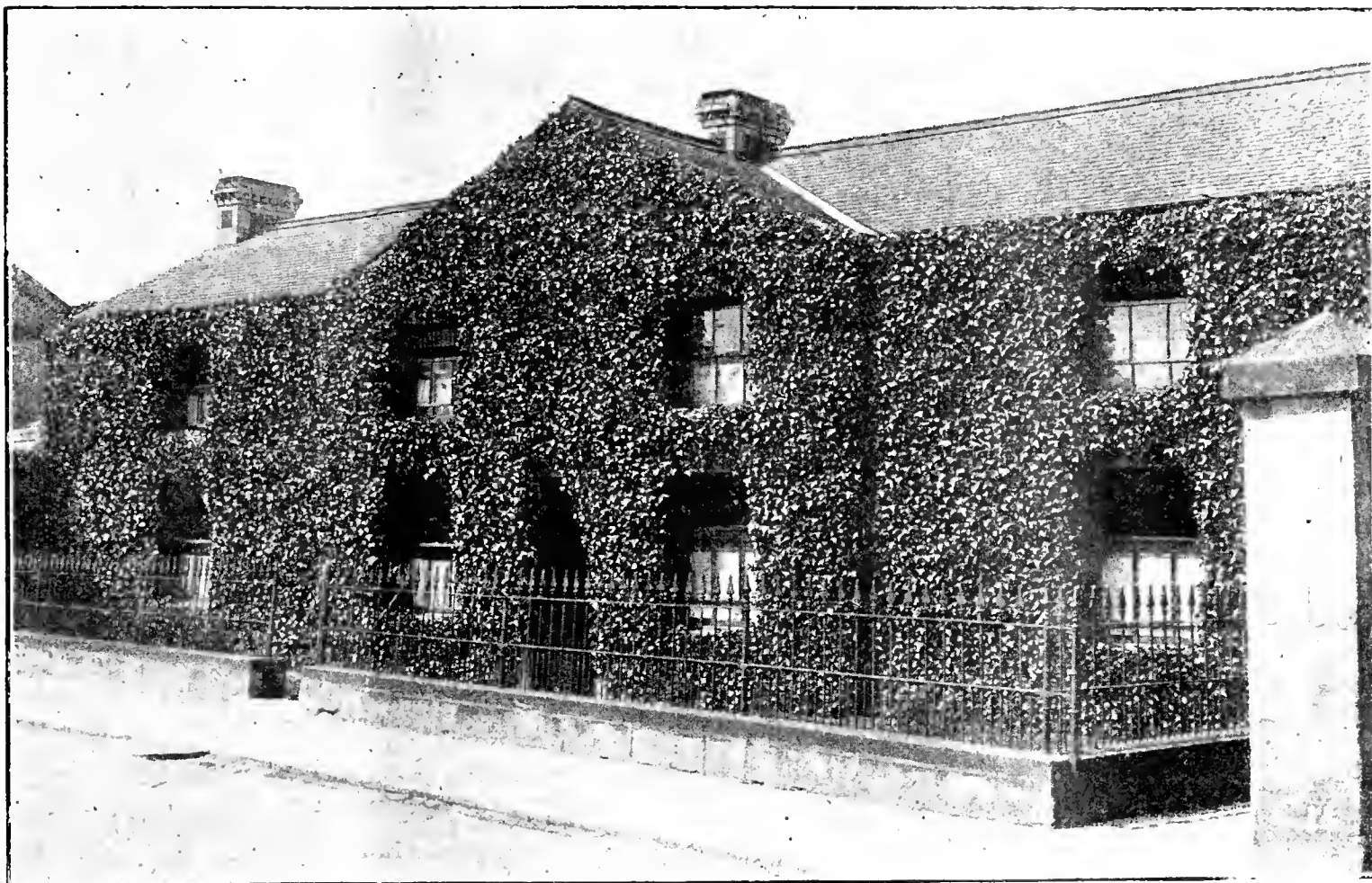


Photo by

Fairburn, Nostell.

Gardener's Bothy at Nostell Priory.

*Phalænopsis*, with *Asparagus* and *Maidenhair Fern* accompaniments; second, Messrs. Perkins with a superb example; third, Messrs. G. and H. Suckling, Wolverhampton. For a bridesmaid's bouquet Messrs. Perkins were to the front with a tasteful arrangement of *Odontoglossum* and *Lælio-Cattleya*; second, Messrs. Jenkinson; and third, Messrs. Tucker.

In the class for an arrangement of hardy border flowers there was a lively contest. Two equal first prizes were awarded to Messrs. R. Wallae and Co., Colchester, and Messrs. Harkness, Bedale; second, Messrs. G. Gibson and Co.; third, Messrs. Barr and Sons, London. Dinner-table decorations were unusually good. The first prize was awarded Messrs. Jenkinson and Sons, the decoration being composed of Orchids, principally arranged lightly and blending exquisitely; the second prize to Messrs. Suckling with a tasty arrangement of pink Carnations, a *Lily of the Valley*, *Smilax*, and *Asparagus* fronds; third, Mr. W. Vause; and fourth, Messrs. Jones and Sons, Shrewsbury.

For a collection of decorative plants and bunches of cut flowers, &c., arranged for effective display on staging, not to exceed 6ft by 4ft, Mr. W. Finch secured the first prize; second, Mr. G. Hancox, West Bromwich; third, Mr. E. Simpson, gardener to C. T. Mander, Esq., The Mount, Tettenhall Wood. For the most tasteful arrangement of Pansies and *Violas* set up in such a way that they will remain in a fresh condition for three

Mr. V. B. Johnstone, Wolverhampton, secured Mr. Henry Eckford's special first prize for twelve varieties of his Sweet Peas, and Mr. W. Shropshire, Market Drayton, got Mr. Robert Sydenham's special first prize of £1 10s. and large silver medal for twelve bunches of his own varieties.

In the gardeners' and amateurs' section, groups of plants arranged for effect were noted for considerable merit. The first prize was awarded to Mr. R. Sharpe, gardener to H. Lovatt, Esq., Bushbury; second, Mr. A. Cryer, gardener to J. A. Kenrick, Esq., Edgbaston. Mr. Cryer was also successful in several other classes. Mr. E. Simpson obtained the first prize for twelve varieties of cut flowers, stove or greenhouse; and Mr. J. V. Macdonald the second prize. Space prohibits mention of the numerous other exhibits of plants and flowers. The cottagers' classes, as usual, were most creditably represented.

Collections of forced fruits in the open classes were highly creditable. For eight dishes, to include two varieties of Grapes, one black and one white, three bunches of each, one Melon (*Pines* excluded), first prize £10, the first prize was accorded Mr. J. Doe, gardener to Lord Savile, Rufford Abbey, Notts, with grand *Madresfield Court* and *Muscat of Alexandria* Grapes; *Crawford Early Peaches*, *Barrington ditto*, *Violette Hâtive Nectarines*, *Best of All Melon* (fine), *Brown Turkey Figs*, and *Royal Sovereign Strawberries*. Mr. J. H. Goodacre, Elvaston Castle Gardens,



second with very good Black Hamburgh Grapes, Muscat of Alexandria wanting in colour, Brown Turkey Figs, Bellegarde Peaches, Lord Napier and Spencer Nectarines, a large Melon, and a very fine dish of Royal Sovereign Strawberries; the third prize to Mr. R. Dawes, gardener to the Hon. Mrs. M. Ingram, Temple Newsam, Leeds. For four bunches Grapes, distinct, two black and two white, there was a keen competition, and first honours were awarded to Mr. J. Doe, gardener to Lord Savile, with an excellent exhibit of Black Hamburgh, Madresfield Court, Muscat of Alexandria, and Foster's Seedling; second, Mr. S. Barker, gardener to the Duke of Newcastle, Clumber Park, with very good examples of Black Hamburgh, Madresfield Court, Buckland Sweetwater, and Foster's Seedling; third, Mr. J. Read, gardener to Earl of Carnarvon, Brethby Park; and fourth, Mr. T. Bannerman, gardener to Lord Bagot, Blithfield Hall. For two bunches black Grapes the first prize fell to Mr. W. Dawes, gardener to Lord Trevor, Chirk Castle, with two superb bunches of Black Hamburgh, large in berry and of perfect finish; second, Mr. J. Doe, with grand examples of Madresfield Court; third, Mr. J. Leadbetter, with fine Black Hamburgh; and fourth, Mr. S. Barker.

For two bunches of white Grapes Mr. J. Doe scored with remarkably fine Muscat of Alexandria so far as bunch and berry were concerned as to size, and very well ripened considering the season; second, Mr. R. Lawly, gardener to W. Darby, Esq., Baschurch, Salop, with very fine examples of Buckland Sweetwater, thoroughly ripened; third, Mr. S. Bremmell, gardener to H. H. France Hayhurst, Esq., Wellington, Salop, with Muscat of Alexandria.

For a green flesh Melon Mr. T. Somerford, gardener to the Earl of Shrewsbury, Ingestre Hall, Staffs, was awarded the first prize for Earl of Latham variety; second, Mr. J. Read, with Countess; third, Mr. J. H. Goodacre. For a scarlet flesh, Mr. R. Dawes, with Scarlet Seedling, was awarded the first position; second, Mr. T. Bannerman; and third, Mr. J. Read.

Peaches were pretty numerous, and of very good colour. Mr. T. Bannerman scored with a finely coloured dish of Royal George; second, Mr. W. L. Bastin, gardener to Sir Alexander Henderson, M.P., West Stafford; third, Mr. F. Somerford. For six Nectarines, Mr. J. Read won with highly coloured Violette Hâtive; second, Mr. J. Doe, with Lord Napier; and third, Mr. T. Bannerman with Violette Hâtive. For three dishes of Tomatoes Mr. J. Read led with Magnum Bonum; Mr. G. Gibson, gardener to R. W. Hudson, Esq., Marlow, second; and Mr. B. Ashton, third.

In the gardeners' class prizes were offered for a collection of six varieties of fruit (Pines excluded). Mr. T. Bannerman further distinguished himself by securing the first prize with fine examples Black Hamburgh, Muscat of Alexandria Grapes, Royal George Peaches, Lord Napier Nectarines, Brown Turkey Figs, and a Lord Latham Melon; second, Mr. J. Read; and third, Mr. J. H. Goodacre.

For a collection of ten varieties of vegetables Mr. E. Beckett, gardener to Lord Aldenham, Elstree, scored with beautiful examples of Sutton's Magnum Bonum Cauliflowers, Green Globe Artichokes, New Red Carrots, Perfection Vegetable Marrow, Early Snowball Turnip, Edwin Beckett Peas, Canadian Wonder Beans, Ideal Potatoes, Tomatoes, and Onions. Second, Mr. J. Gibson, gardener to R. W. Hudson, Esq., Marlow, with also an excellent exhibit; and third, Mr. W. L. Bastin. Special prizes for vegetables were offered by Messrs. Sutton and Sons, Reading, for the best collection. Mr. J. Gibson was placed first with a remarkably fine lot; second, Mr. B. Ashton, gardener to Earl of Latham; third Mr. W. L. Bastin; fourth, Mr. J. Reed; and fifth, Mr. W. Waldron, Kingswinford. In competition for Messrs. Webb and Sons' prizes Mr. W. L. Bastin was first, Mr. E. Beckett second, Mr. J. Read third, and Mr. R. A. Newell, Wellington, fourth.—W. G.

#### Medals Awarded and Certificates.

**GOLD.**—Messrs. Dobbie and Co.; Messrs. J. Veitch and Sons; Messrs. E. Webb and Sons; Mr. Henry Eckford; Messrs. T. Hill and Sons; Mr. L. J. Ching; Mr. Webster, superintendent, West Park, Wolverhampton; Messrs. Blackmore and Langford; Messrs. Richard Smith and Co., Worcester; and Messrs. Dickson, Chester.

**SILVER.**—Mr. Robert Sydenham, Birmingham; Messrs. Howitt and Co., Birmingham; Messrs. Geo. Jackson and Son, Woking; Messrs. Hinton Bros., Warwick; Messrs. Jones and Sons, Shrewsbury; Messrs. Jarman and Co., Chard; Messrs. Tom B. Dobbs and Co., Wolverhampton.

**BRONZE.**—Mr. W. L. Pattison, Shrewsbury.

**CERTIFICATES OF MERIT.**—The Vineries, Limited, Acocks Green; Mr. W. Waters, Acocks Green.

**CERTIFICATED PLANTS.**—Messrs. Dobbie and Co., Rothesay, for Sweet Peas White Queen, Jessie Cuthbertson, and Britannia; Messrs. Hill and Son, Edmonton, for Pteris Wimsetti multiceps; Mr. Robert Greenfield, jun., Leamington Spa, for Asparagus myriocladus.

### Beckenham Horticultural, July 9th.

Situated in a very good district, and having the support of all the residents, the committee and other officials of this society generally find success attending their efforts. They provide a varied programme of events in connection with the show, having a good military band, horse-leaping, &c., and in other ways do what they can to provide amusement. The summer show, held on Wednesday, July 9, was good in all respects, and the day was fine at first but rained heavily in the afternoon. Lord Raglan opened the exhibition at 2.30. An hour earlier the committee, judges, exhibitors, and friends of the society met at luncheon.

Class 1, for a group of plants arranged for effect, brought out a number of exhibits, but Mr. W. Potter's group (gardener, Mr. Cogger), of Stinside, Lawn Road, was incomparably superior to the others. *Humea elegans* and *Gloriosa superba* furnished a light back to the group, and brightly coloured *Crotons* in varieties formed the body of the arrangement. We noticed *Miltonia vexillaria*, *Thunias*, *Dendrobium densiflorum*, and *Selenicpeidium grande*, all of them good samples, and the racemes of *Francoa ramosa*, the *Cannas*, and fine *Gloxinias* further contributed toward furnishing an effective group of plants. Second award fell to Mr. D. Spearer (gardener, Mr. T. Hopkins), South Lowe, Chislehurst, with a heavy, dull display. For a lesser group of plants in Class 2 the premier award was deservedly carried off by Mr. J. Boyle Woodey, Selwood, Hayne Road; second, Mr. C. Termin, Langley Road; and third, Mr. Bartholomew, Grassington, Hayne Road.

Mr. E. J. Preston, Kelsey Park, carried off leading honours for six table plants, and they were well grown, though everyday sorts; and Mr. W. C. Gunn was second. Mr. Boyle Woodey led for three of the same, and Mr. W. Rogers came second. With half a dozen fair *Gloxinias* Mr. M. Bartholomew easily beat his opponent for three flowering stove or greenhouse plants, with Mr. Gunn second.

*Achimenes* were only staged by two entrants, but their quality was very superior, notwithstanding the slack competition, and Mr. Potter's plants, in large pans, were literally massed with blooms. For three *Zonals*, well-grown on the whole, but rather poorly flowered, Mr. H. Crowther, Broadclyst, Wickham Road, received first prize; while for three Ivy-leaved *Pelargoniums* (or *Geraniums*, as they are wrongly named in the schedule) he also led. His varieties *Galilee* and *Souv. de Chas. Turner* were effective, though not developed to the fullest.

It is a delight to see *Fuchsias* at their best, and good plants demand great patience for their culture and training. Here, in Class 16, Mr. W. Cobbett, of Winterdyne, Lawn Road, beat Mr. J. Moreland, each with creditable plants. For one specimen plant in flower (Class 9) Mr. H. F. Simonds, Woodthorpe, Southend Road, was in advance with a well-flowered hybrid *Cattleya*; and second Mr. Crowther, with *Odontoglossum luteo-purpureum*, with a fourteen-flowered raceme.

Ferns are evidently favourites down Beckenham way, and many really good representative plants were on view. For three exotic species Mr. W. Rogers was in the run, with Mr. Boyle Woodey second. The former staged a very fine *Lygodium*. For four distinct ditto Mr. Potter again won, and his *A. Farleyense* was a perfect specimen. Mr. W. Cobbett came second with good but smaller Ferns. Specimen foliage plants were poor, the first award in Class 10 going to Mr. E. J. Preston with a huge *Cycas*; second, Mr. Simonds, Woodthorpe, with *Anthurium crystallinum*; and third, Mr. Crowther, with a large basket containing *Asparagus Sprengeri*. In Class 12, also for a specimen foliage plant, Mr. Woodey led with a typical *Dracæna* (*Cordylina*) *Veitchii*, and Mr. Moreland second with a *Kentia*. Mr. A. Baker, Elderslie, beat Mr. Fergusson, Storthholme, Rectory Road, in Class 8, for six miscellaneous plants, and each showed well-grown plants, comprising *Anthurium Scherzerianum*, *Croton Heathi elegans*, *Acalypha hispida*, *Hydrangea Hortensia*, *Cobœa scandens*, *Calocasia antiquorum*, and *Begonias*. Mr. A. Baker's *Selaginellas*, in Class 25, were really attractive; and Mr. Thompson's four plants (Class 7), which beat those of Mrs. Clark, were also worthy of notice. In Class 11 Mr. J. Moreland had the best specimen flowering plant—a good *Lantana*. For three flowering stove or greenhouse plants Mr. A. Barker deserved the premier place, which he won, with really fine *Hydrangea*, double *Tuberous Begonia*, and *Anthurium*, Mr. Simonds following.

The *Petunias* entered for Class 23 were fine samples of culture, and Mr. Thompson, Lindifferon, Rectory Road, must have felt proud of his victory. The *Begonias* were very large and inclined to be ungainly, though Mr. Crowther's three in bloom, taking first in Class 15, were creditable, though the flowers were hardly expanded. Mr. Thompson's specimen *Fuchsia* stood nearly 6ft high, and tapered conically in fine form; second, Mr. Moreland. The latter had it all his own way for a couple of *Coleus*, and seldom have we seen better

plants at any local show. Mr. Crowther came second with good samples.

#### Roses, &c.

In Class 50, for the forty-eight distinct varieties, the leading honours went to Messrs. Bunyard and Co., of Maidstone, with fair average blooms; and second, Messrs. G. and W. H. Burch, Peterborough. Four entered. Messrs. Burch were first in the succeeding class for the eighteen H.P.'s in twelve varieties, and staged an even set; Messrs. Bunyard came second, and Mr. E. Anderson, Shirley Cottage, Shirley, third. Messrs. D. Prior and Son, Colchester, led in Class 52, for eighteen Teas and Noisettes, by far the best bloom being Maman Cochet; and second, Messrs. Bunyard. Mr. A. Merridew, gardener at Shirley Cottage, beat Mr. Herbert Rogers for twelve Roses in six sorts.

Shirley Poppies with a class to themselves we have not previously seen at a show, but the beauty of the flowers undoubtedly deserves such special recognition. Mrs. Stilwell, 14, Southend Road, led for three vases, and Mrs. Vincent, The Pines, followed second. Sweet Peas made a brilliant display, and Mr. W. H. Stone, Donnington, Sydenham, was first for a dozen distinct sorts. For a collection of six kinds of Salads Mr. F. Sinnock was first.

Fruit and vegetables were a minor feature. For two bunches of black Grapes Mr. Preston led, and for a collection of four dishes of hardy fruits the first award went to Mr. Moreland. For three dishes of the same Mrs. Clark was first. For the dish of Peaches or Nectarines, first, Mr. Bayer. A collection of Strawberries from Mr. E. J. Preston, Kelsey Park, received a commendation.

#### Trade Exhibits.

Messrs. Surman, Victory Nursery, Beckenham, staged a large group of their fine strain of Petunias, and were awarded a silver-gilt medal.

Being within a get-at-able distance from Beckenham, the Messrs. Laing, of Forest Hill, London, exhibited somewhat largely, and among other things we noted how fine were their Streptocarpus of the multiflora hybrid strain; also their double Begonias, Gloxinias, and Caladiums. For this group they received a silver-gilt medal. They had also a very large assortment of cut Rose blooms and garden Roses in bunches, Mrs. John Laing being very prominent. Hardy plants were also contributed.

Messrs. Cannell and Sons, Swanley, set up a group of the far-famed Cannas ("Cannell's Cannas"), among which were the varieties Osear Dannecker; Duke Ernst, Mrs. G. A. Stroblein, and Victory. The new Kochia scoparia lined the front. Near by they had a table of border flowers. (Silver-gilt medal.)

Some delightful floral arrangements, executed with great taste, came from Mr. J. Horsman, Beckenham, and received a silver medal.

Messrs. Carter, of High Holborn, had a large collection of hardy flowers, among which Delphiniums were prominent. (Silver medal.)

Mr. Bates, gardener to Mr. E. Dennis, staged a magnificent group of Gloxinias, and was awarded a silver medal.

A miscellaneous group of flowering and foliage was contributed by Mr. G. E. Day, gardener to Mr. H. F. Simonds, receiving a silver-gilt medal.

Mr. John R. Box, West Wickham and Croydon, staged a lovely group of single and double-flowered Tuberous Begonias, those with light colours and fimbriated edge being most admired. He also had hardy Alpine plants and herbaceous cut flowers.

Messrs. Bunyard and Co. contributed garden Roses and good hardy flowers, and were awarded a silver medal.

Towards the south end of one of the large tents Messrs. J. Peed and Son, West Norwood, London, set up an exceptionally fine group of Caladiums, well grown and well staged. Their Silver Cloud, Mrs. Harry Veitch, Arassanhy. Ernst Nenbert, and Golden Queen, among others, were charming.

### Thornton Heath, July 9th.

Unfortunately for the success of the second annual Rose and general horticultural exhibition, the rain which fell just after five o'clock practically spoilt all interest or enjoyment of it. The Rose section was devoid of any support from the nurserymen, who were exceedingly busy during last week. The amateurs' and gardeners' classes, however, were strongly supported on the whole. Fruit and vegetables were placed in two separate tents, and some very good entries were noticeable, although we failed to find a representative collection of vegetables, the best (six kinds) coming from Mr. W. Child.

In Class 5 for twelve H.P. Roses, distinct, the N.R.S. bronze medal and 15s. as first prize, was secured by Mrs. West, Rydal Grange Road, Sutton, the best blooms being M. Verdier and Clio; second award became the property of Mrs. W. H. Lascelles,

Sydenham Road, Croydon, with strong blooms, which must have run the first set very closely; third came Mr. G. A. Schofield, of Sutton. There were five entries.

Mr. J. Heading's four distinct Roses, three trusses of each, were judged superior to those of Mr. G. Prebble, gardener to Miss Thrale, of Shirley, but neither were very striking. Nine competitors came forward in Class 8, for six H.P.'s, the premier place being filled by Mr. K. H. Gifford, of Edenoor, Sutton, with good samples of Francois Michelin, Mrs. J. Laing, Suzanne Marie Rodocanachi, Horace Vernet, Her Majesty, and Comtesse de Ludre. Mr. Herbert Molyneux, 75, Galderden Road, Balham, followed second with good Killarney, Charles Lefebvre, and Duke of Wellington.

Eight competitors ranged up for the six distinct Teas, but all were small in size, though mostly of good form and colour. Mr. West was first with Innocente Pirola, Maman Cochet, The Bride, Bridesmaid, White Maman Cochet, and Mrs. Edward Mawley. The succeeding place was awarded to Mr. Lascelles, and third Mr. Schofield. Again nine entrants contested the merits of their blooms in Class 10 for six flowers of one sort, the premier honour eventually falling to Mr. K. H. Gifford with superb blooms of Mrs. John Laing. These were of moderate size but of splendid form and good colour. The silver medal for the best bloom in this division also fell here. Mr. Lascelles came next with the same variety, but the blooms were much weaker; and third Mr. West, again with Mrs. J. Laing.

The groups of plants compared favourably with those seen at other local exhibitions, there being eight altogether, the first place being captured in Class 9, by Mr. J. Galvin, gardener to H. Butcher, Esq., of Purley. There were no fewer than seventeen tables of floral decorations, which goes to prove how great an interest the ladies take in their flower show. Class 64A, also for table decorations by gentlemen. Miss May Dart won in the larger Class (59) for table decorations, but her arrangement seemed somewhat too thick and heavy, with a superabundance of pink Sweet Peas and grass. The second award we could not discover, and third Miss West. For the following class Miss Pearson beat Miss M. Dart for a bouquet, she using Niphetos Roses, and Miss Dart had mauve and white Sultans. For three gentlemen's buttonholes Mr. T. Cook, jun., displayed the better skill, and Miss Fenn followed second. This gentleman, however, was second to Miss Dart in Class 64A, with a decorated table, the former employing Shirley Poppies alone, and Mr. Cook used pale lavender Sweet Peas, which furnished a cool and pleasing feature. For two ladies' sprays, Miss M. N. Hill beat Miss West.

Hardy flowers and Sweet Peas filled the whole of one long side of the large tent, the best collection being that in Class 56, from Mr. W. E. Carr, 78, Windmill Road, who included Epilobium angustifolium, Centranthus longifolius, Spiraea palmata, Gladiolus The Bride, and other choice border flowers. He was also first in Class 35, under Division II., for another collection.

The entries for Sydenham's prizes offered for Sweet Peas were not at all so attractive as they might have been, there being no white paper beneath the vases, and instead of being glass vases, they were earthenware. A strong competition resulted all the same, and some fine bunches were displayed.

The plants furnished a centre of interest, the six Ferns in Class 29 securing first prize being thoroughly good samples. Miss Mortimer, of Neil Lane, was the winner, and staged a fine Lomaria gibba, one good Dicksonia squarrosa, and a representative Adiantum Pacotti. Miss Perrett's six Fuchsias in Class 18, however, were small. Other exhibits did not call for special attention.

#### Trade Exhibits.

Mr. Henry Eckford, of Wem, Shropshire, was present with a display of Sweet Peas all beautifully arranged, and which furnished one of the great features of the exhibition. Set up in tall glasses tier above tier, over white paper, the bunches were delightful, and we noticed the new pure white Dorothy Eckford, a white seeded variety, which comes consistently true, and is certainly the best white now extant. There were also Othello, Emily Eckford, Gorgeous, Miss Wilmott, Prince Edward of York, Peach Blossom, Captain of the Blues, Hon. E. Bouverie, Mars, Lady Gresil Hamilton, Princess of Wales, George Gordon, and Black Knight among others. (Silver medal.)

Mr. G. H. Cooper, Sydenham Road, Croydon, staged a handsome group of well-flowered Show Pelargoniums; a very creditable display.

From Mr. C. A. Blogg, Brighton Road, came a collection of Caeti.

Mr. McArthur, Flower and Vegetable Gardens, Thornton Heath, contributed Cupid Sweet Peas in pots, showing their suitability for small gardens. He had also a display of Strawberry fruits and cut flowers, such as Sweet Peas, Delphiniums, Shirley Poppies, and Pelargoniums. His new Zonal Pelargonium Mrs. McArthur, with white centre and bright scarlet-crimson edge, is very showy.



### Ipswich, July 9th.

This show which was held as usual of late years in the Upper Arboretum, was unfortunate in the matter of weather. A smart shower fell in the morning, and from about 4 p.m. it rained steadily till dark. The society is by no means so popular or well patronised as it should be in such a place as Ipswich, at the best of times, and I fear the very small amount of gate money received will have a bad effect upon the finances.

Competition in the Rose classes was very poor; in the open classes Messrs. B. R. Cant and Co. were almost the only exhibitors. The quality of the blooms exhibited by this firm was pretty good. In the thirty-six the new Ben Cant was noticeable, and also the new Frau Karl Druschki, which looks like being quite the best white H.P. in fine weather; Marie Baumann and Xavier Olibo were also fine. The new Exquisite H.T. did not look like a very good show Rose. In trebles, besides the varieties named, Papa Lambert H.T. was conspicuous, wanting one more day of dry heat to be fine indeed. And there was also good trebles of S. M. Rodocanachi, Fisher Holmes, and Gustave Piganeau. The same firm had also no competitor in twelve Teas, which were indifferent. In six similar Roses the same exhibitor won with S. M. Rodocanachi, Mr. R. C. Notcutt being second with Marquise Litta—often a disappointing Rose to show. In garden Roses Messrs. B. R. Cant and Co. were again first; L. Holden, Esq., second.

These was competition in the amateur classes, but it was principally confined to two exhibitors. In 24 Rev. A. Foster-Melliar was first with a huge Mildred Grant a little split in the centre, and Horace Vernet, Dr. Andry, and Comte Raimbaud in good condition; Rev. H. A. Berners was second with good samples of Horace Vernet and Mrs. W. J. Grant. In twelve Teas Mr. Foster-Melliar was first, having good samples of Souv. d'Elise, Bridesmaid, Anna Olivier, Madame Cusin, and White Maman Cochet; Mr. Berners was second, having Maman Cochet and Madame Cusin as his best. The same order was observed in six trebles, Mr. Foster-Melliar having a very good triplet of Madame Cusin (which likes hot weather), Kaiserin A. Victoria, and White Maman Cochet; Mr. Berners showed a good triplet of Mrs. Sharman Crawford; the Hon. W. Lowther was third. The procession continued in the same order in twelve Roses, Mr. Foster-Melliar showing François Michelin, Comte de Raimbaud, Bessie Brown, and Catherine Mermet well. Mr. Berners had a very good Duke of Edinburgh and a nice A. K. Williams, and Mr. Lowther had Kaiserin A. Victoria as his best. In six H.P.'s of one variety Mr. Berners was first with Mrs. Sharman Crawford, Mr. F. Corder second with Ulrich Brunner, and Mr. Foster-Melliar third with Marquise Litta. In six Teas of one variety Mr. Berners was first with Madame Hoste and Mr. Foster-Melliar second with Mrs. E. Mawley (which likes cooler weather). In another class for twelve Roses Mr. Foster-Melliar was first, having Catherine Mermet as his best, and Mr. Corder second.

The display of garden Roses was not very good, and in the amateur classes many of the bunches were not named. I noticed, however, one that was. It was in an exhibit where the glass jars for the Roses had evidently been previously devoted to other purposes—a bunch of white Polyanthas was very clearly and distinctly labelled "Blackberry Jam."

Herbaceous flowers were a great feature of the show, particularly the class for thirty-six bunches, in which Mr. C. Jacobi, Henley Road Nurseries, Ipswich, was placed first with a very bright assortment. Iris Monnieri, Delphinium Jacobi, Heuchera macrantha, and Oenothera speciosa being the most noticeable bunches. Mr. R. C. Notcutt was second with a collection, but slightly inferior, his best bunches being Campanula persicifolia Morrheimi, Gladiolus delicatissima, and Agrostemma Walkeri.

Sweet Peas made an interesting display. For twelve bunches Mr. E. Abbott, Ardleigh, was first, having Lovely, Othello, Queen Victoria, Earliest of All, Salopian, Lady Grisell Hamilton, Lady Mary Currie, Navy Blue, Prince Edward of York, Aurora, Duke of Westminster, and Lottie Hutchins. Mr. A. Creek, gardener to Sir Cecil Domville, The Chantry, Ipswich, was second with a stand in which the new varieties Coccinea, Miss Wilmott, and The Hon. Mrs. Kenyon were conspicuous.

Pot plants were, on the whole, poor, and call for no special comment. Competition was good in the fruit classes, some fine Grapes, Peaches, Nectarines, and Strawberries being staged.

For a collection of fruit Mr. W. Messenger, gardener to Mr. C. H. Berners, Woolverstone Park, was first with Black Hamburgh and Foster's Seedling Grapes, Ne Plus Ultra Melon, Dymond Peaches, Pineapple Nectarine, and Brown Turkey Figs. Mr. J. Barson, gardener to the Earl of Sandwich, Hitchingbroke, Huntingdon, was second. Other prizewinners in the fruit classes were Hon. W. Lowther, Campsea Ashe; Sir C. Domville, Mr. D. Ford Goddard, M.P., and the Right Hon. James Round, M.P.

Messrs. W. Cutbush and Son, of Highgate, staged a fine lot of cut Carnations, not for competition. These included Cecilia, the lovely new yellow border kind, and several fine Malmaisons, such as Mrs. Trelawny, Nautilus, and Lady Rose.

Mr. R. C. Notcutt put up a small group of the new annual *Arctotis grandis*, which did not appreciate the wet weather, the flowers remaining closed all the afternoon. Many beautiful designs were noticed among the table decorations which space will not permit us to describe.—E. C.

### Woodbridge, July 10th.

This very popular show, so thoroughly well supported by the good people of Woodbridge, has earned quite a reputation for its good fortune in the very important matter of weather. In more than twenty years I think I can only recall one occasion on which rain fell, and then but slightly; but it was a heavy and severe thunderstorm which visited the show ground at the most critical time for visitors (about 3.15 p.m.), and I am afraid the whole business must have suffered considerably in consequence.

There was a good competition in all the Rose classes, and the standard was fairly high. In the open section the three Colchester nurserymen competed, though most, if not all of them, were also exhibiting at Brentwood or elsewhere. For the handsome challenge cup (thirty-six Roses) Messrs. B. R. Cant and Sons were first, having Mrs. J. Laing, Mrs. Cocker, Xavier Olibo, A. K. Williams, and Marie Van Houtte (grand in size and colour) as their best flowers. Messrs. D. Prior and Son followed quite closely with good examples of Mrs. J. Laing, Comte de Raimbaud, Duchesse de Morny, and Charles Darwin. Messrs. F. Cant and Co. were third with rather smaller and more passée flowers, among which a good Killarney might be seen. For twenty-four, however, this exhibitor was first, having in this box a very fine, though not extra, large specimen of Mildred Grant, and Mrs. Cocker and Fisher Holmes good. Messrs. D. Prior and Son were second, with Bessie Brown and Mrs. J. Laing as best, and Messrs. B. Cant and Sons third, showing a really fine Le Havre and a good Marie Baumann. In twelve Roses Messrs. B. Cant and Sons were first, Marie Baumann, Frau Karl Druschki, and Bessie Brown being among their best; Messrs. D. Prior and Son were second with a fine Maman Cochet, and Messrs. Frank Cant and Co. third. The latter was the only exhibitor of garden Roses in this section, and a very good exhibit it was.

Five amateurs showed stands of twenty-four, Mr. Orpen being first with small blooms, fairly neat and clean, but by no means up to his standard, his best Roses being presumably at Brentwood. White Maman Cochet was probably his best. Mr. Foster-Melliar was second, White Lady and Muriel Grahame being his best. Among the six exhibitors of twelve Roses Mr. Foster-Melliar was first, Charles Lefebvre, Catherine Mermet, and Mrs. E. Mawley being good; Mr. Orpen was second with Madame Cusin and Comtesse de Ludre in good order and Mr. Curtis, of Wormingford, third. Seven amateurs showed six Roses, Mr. Orpen being first, Mr. Cook (of Birch) second, and Mr. Foster-Melliar third.

There was this year no class for dissimilar Teas, a strange omission for a show like Woodbridge. I do not remember ever attending a Rose show before where there was no class for Teas. For six Teas of one variety Mr. R. Steward was first with Mrs. E. Mawley, Mr. Orpen second with Madame Cusin, and Mr. Curtis third with Maman Cochet. The competition was good in this class. In garden Roses Mr. Orpen was first, and Miss Youell second with a poorly arranged stand.

There was good competition and a fine exhibition in all sections of the show, the decorations being, as usual, a popular feature. Some may perhaps think that this sort of thing may be rather overdone, and probably the omission in future of such classes as "best decorated plate handles, ribbons allowed," and "most tastefully floral decorated lady's sunshade, suitable for garden party, ribbons allowed," would not cause Woodbridge Show to suffer from any loss of dignity.—W. R. RAILLEM.

### Bath, July 10th.

The fates of this popular society was found once again, on the 10th, in an element of uncertainty as regards weather. The morning after the heavy storms of the previous day was of a fitful nature, alternating between sunshine and cloud, and the concern of the executive was manifested in the frequent inquiry of the prophets, Are we to have a fine day? This unfortunately was in part denied them, for the early afternoon found thunder, storm, and wind, each in effort thwarting would-be patrons in their venture to review the exceedingly fine show of flowers prepared by so many willing and interested hands.

There were unanimous exclamations of the great excellence and extent of the Rose display. Indeed, Bath excelled itself, despite the untoward weather of such long standing.

The reputation of the Ireland Roses were well maintained. Once again the Messrs. A. Dickson and Sons, Newtownards, carried off the principal prizes for seventy-two varieties and thirty-six trebles. In the first-named there were a great evenness of bloom and freshness and diversity of colour, while variety embraced some of the firm's own introductions and novelties. The following kinds were staged:—A. K. Williams, Innocente Pirola, Shardon, Comtesse de Turenne, Marquis de Litta, Caroline Testout, Chas. Lefebvre, Lady Clanmoire, Ulrich Brunner, Margaret Dickson, Marquis of Dufferin, Tom Wood, Gladys Harkness, Tom Mills, Horace Vernet, Edith D'Ombrian, Mamie, Lady Arthur Hill, Kaiserin A. Victoria, Duke of Wellington, Bertha Gieman, Marie Baumann, Merville de Lyon, Mrs. J. Laing, Duchess of Portland, Marie Rady, Madame G. Luizet, Duke of Teck, Florence Pemberton, Louis Van Houtte (fine), lady Ashtown (new), Mrs. R. G. Sharman-Crawford, Duc de Rohan, G. Piganeau, Avoca, S. M. Rodocanachi, Mildred Grant (Silver Medal N.R.S.), Liberty, Souv. de S. A. Prince, Général Jacqueminot, Danmark, Ed. Herve, Marchioness of



**Cypella Herberti.** (See page 56.)

Downshire, Heinrich Schultheis, Killarney, Xavier Olibo, Mrs. Cocker, Duchess of Bedford (fine), Her Majesty, Alfred Colomb, Mrs. Ed. Mawley, Earl Dufferin, Ernest Metz, Madame Delville, Medea, Mrs. W. J. Grant, Countess of Caledon, François Michelin, Baroness Rothschild, Prosper Langier, White Lady, Beauty of Waltham, Ulster, Comte Raimbaud, Robert Scott, Dr. Andry, Ledbury, Alphonse Soupert, and Bessie Brown (extra). The King's Acre Nurseries, Limited, was second, their best blooms being Lady Sheffield, Madame Chas. Wood, Reynolds Hole, Sultan of Zanzibar, Horace Vernet, and Abel Carrière. Messrs. Cooling, Bath, were third; Victor Hugo and Gladys Harkness in this stand were extra fine. There were seven entries.

In the succeeding class there is necessarily a repetition of the foregoing names, which the Messrs. Dicksons staged in their well-known form, the most striking blooms being Mrs. W. J. Grant, A. K. Williams, Caroline Testout, and Louis Van Houtte, the latter extra fine. Again the King's Acre Nurseries, Limited, were a good second, Marie Rady, Jean Ducher, Duke of Fife, Mildred Grant, and Kaiserin A. Victoria representing the best. Messrs. Cooling took the remaining prize. For eighteen trebles

Mr. George Prince, Oxford, well won the first prize, which included fine Maman Cochet, Mrs. Grant, Fisher Holmes, The Bride, Madame de Watteville, White Maman Cochet, Innocente Pirola, Bridesmaid, Bessie Brown, and Marie Baumann; second, Mr. John Mattock, Oxford, with Amazon, Le Havre, Muriel Grahame, Marie Rady, Medea, and White M. Cochet as his finest; third, Messrs. Townsend and Sons, Worcester. The latter were in good form in the next class for thirty-six distinct, staging J. Dickson, Tom Wood, Killarney, Clio, Capt. Hayward, Bladud, Mrs. Crawford splendidly. Mr. George Prince followed closely, Reynolds Hole being a conspicuous blossom in his stand. Mr. J. Mattock was an excellent third.

Mr. G. Prince scored again in a class of eighteen distinct Teas or Noisettes, and with a fine bloom of Ernest Metz won the silver medal of the N.R.S. for the best bloom in that section. Golden Gate was another striking flower in this stand. Mr. J. Mattock staged well for second place, Princess of Wales, Souv. d'Elise Vardon, Bridesmaid, and Etoile de Lyon being conspicuous flowers. Messrs. Dicksons were third among several other exhibits.

Staged in vases with long stems, twelve varieties, five of each, made a distinct feature, Mr. Mattock leading with good blooms of Mrs. Laing, Catherine Mermet, Maman Cochet, Louis Van Houtte, The Bride, and Muriel Grahame. Mr. G. Prince was second with a well-arranged exhibit, unnamed; third, Mr. Geo. Mount, Canterbury. With twelve single trusses of any Rose Messrs. Dicksons won with fine blooms of Mildred Grant; Messrs. Townsend and Son second. Messrs. Tresseder and Sons, Cardiff, and J. Mattock won with Medea the prizes given for twelve yellow varieties. Messrs. G. Mount and Dickson, with Général Jacqueminot and Tom Wood, took the prizes for twelve crimson Roses. Mildred Grant, for Messrs. Dickson, proved the winner among new Roses, six trusses.

In the amateurs' division there were some noteworthy stands, the best twenty-four distinct varieties coming from Conway Jones, Esq., Gloucester, and with a fine bloom of Prince Arthur secured the silver medal of the N.R.S.; A. Hill Gray, Esq., Bath, second, in whose stand Princess Beatrice was a noteworthy bloom; third, Mrs. R. Rust, Swanswick. For twelve trebles the same positions were held by the foregoing exhibitors, and with eighteen distinct varieties Mr. R. Foley Hobbs, Worcester led the way. Several other classes were represented by local growers, and it is worthy of note that no inferior stand in the open or amateur sections were on view.

Begonias and Strawberries are amalgamated in the title of the Bath Summer Show, and though the former in a competitive sense was no great feature, Messrs. Blackmore and Langdon's exhibit was sufficient justification for the co-equality. Their double blooms, a foretaste of which has been already reported from the R.H.S.'s Holland Park festival, and well illustrated in a recent number of this Journal. Briefly, they were superb. The Rev. Yorke Faucett was the principal exhibitor of both single and double specimen plants and also cut blooms, Mrs. Sims, also of Bath, taking other prizes.

Strawberries were finely staged, every dish having a high merit. For six dishes Mr. J. Ricketts won in a keen contest, Messrs. Porter and E. J. Ricketts being made equal second. Mr. W. Vilven, Bathford Nurseries (Mr. Button manager), staged in finely developed berries the new Trafalgar, Climax, and Royal Sovereign, the Messrs. Ricketts sharing the remaining honours with good fruit. In the single dish Mr. C. Burridge put up the finest dish of Sir Joseph Paxton we have seen for a long time. Leader produced the heaviest fruit in a class for twelve berries.

Decorated tables by lady competitors numbered twelve, which made a fine floral feature. The same tent accommodated Sweet Peas in great perfection, bouquets and baskets of Roses, vases of Roses, sprays for ladies' wear, and herbaceous flowers, all in great profusion and finest quality. The garden Roses must not be omitted from these in dressed tables. Bunches of separate sorts, single and moss kinds, all contributed to the splendour of the Queen of the West, a title given the largest tent. In these Messrs. Cooling again proved invincible. Such exhibits, displayed as they are so well, are more fascinating even than the more conventional show bloom to a large section of the garden lover and public patron.

Non-competitive exhibits occupied much space, Mr. Godfrey, Exmouth, staging Cannas, Carnations, and Zonal Pelargoniums in pots; Sweet Peas, Campanulas, Delphiniums, and Phloxes in a cut state; and, needless to say, all of high standard. Messrs. House and Son, Westbury-on-Trym, had a large exhibit of their newer Sweet Peas, herbaceous flowers, Violas, and Pansies, including an intensely interesting vase of the old double black Pansy.

Much credit devolves on Messrs. Pearson and Jeffery, who, with their chairman of committee, R. B. Cater, Esq., guide everything with smoothness and business-like tact, and the popularity of the Bath Shows, despite frequent untoward weather, is well maintained.



### Southend (Essex) Rose, July 12th.

The Rose exhibition on Saturday last held, for the first time at Southend, we believe, though of small compass, was of the very highest merit. The first class, for forty-eight blooms in the nurserymen's section, brought forward better flowers than have been seen by us at any Rose show this year, the metropolitan exhibition of the N.R.S. included. It was an instance of a battle of the giants, and these almost alone, with no detractors. The prizes were sufficiently good to attract the best men, and Southend is both get-at-able and interesting, especially the grounds named The Shrubbery, in which the tents were pitched. The attendance of visitors was encouraging, and none but the more genteel element were noted. The band of the School of Gunnery, from Shoeburyness, supplied the music. After judging was completed, the promoters, with the exhibitors and others, met together at luncheon, but of the proceedings there we are unable to speak, as we had not the pleasure of participating in that function. The hon. secretary was the Rev. F. R. Burnside, Great Stambidge Rectory, Rochford.

#### Nurserymen.

Two capital boxes, containing forty-eight blooms, in Class 1 were staged by Messrs. B. R. Cant and Sons, Colchester, there being only a few flowers that one could criticise, and even then the lower petals alone were at fault. They staged perfect blooms of Ulrich Brunner, Horace Vernet, Duke of Edinburgh, Général Jacqueminot, Ulster, Carl Druschki, Reynolds Hole, Madame Cusin, Comte de Raimbaud, Marie Verdier, A. K. Williams (very rich), Suzanne Marie Rodocanachi of brilliant colour, and a splendid flower of Xavier Olibo. The reds were particularly handsome, being all so deeply coloured and every bloom so clean. The set certainly drew forth considerable admiration. The second prize collection was from Messrs. R. Harkness and Co., Hitchin, and, though lacking in size, they were all clean flowers of good size and form. Gustave Piganeau, at the top left-hand corner, was an ideal flower; Bessie Brown and Horace Vernet were each of great merit, and Liberty was shown to perfection. When seen at its best this flower is splendid. Does not Ulster run Mrs. W. J. Grant very close in colour and general character? It is difficult to tell them at times. Grand Mogul was another giant in one of the boxes. Messrs. D. Prior and Son were third, with blooms that would have won at many shows, but which were scarcely fresh enough for Southend. Their Liberty, Horace Vernet, and Victor Hugo and a Princee Camille de Rohan were each show Roses. Five competitors entered.

For eighteen trebles the Harkness firm were here to the fore with brilliantly coloured blooms, but which had suffered from wind and weather. Mrs. J. Laing, Bessie Brown, and Alfred Colomb were each good. Second came Messrs. D. Prior and Son, with splendid Horace Vernets; and third out of five came Messrs. B. R. Cant and Sons with small flowers.

#### TEAS AND NOISETTES.

These were by no means so fine as the flowers in the two foregoing classes. Messrs. D. Prior and Son, Colchester, led with a fair collection of eighteen in Class 7, the freshest being Maréchal Niel, Maman Cochet, Niphotos, and The Bride. There were four collections, and Messrs. F. Cant and Co. followed next with a dark red Madame Cusin, good Bridesmaid, and Ethel Brownlow. Third, Messrs. B. R. Cant and Sons.

Only three firms contested in Class 8 for a dozen Teas in trebles, the Priors, of Colchester, again leading the way. Their flowers here were much cleaner, and on the whole more even. Messrs. F. Cant and Co. formed a good second, and third Messrs. B. R. Cant and Co. The blooms in each set were not of the best form.

#### GARDEN OR DECORATIVE ROSES.

Messrs. Paul and Son, of Cheshunt, led the way against Messrs. F. Cant and Co. and B. R. Cant and Sons (in this order) for twelve bunches of garden Roses, the Cheshunt firm staging very large and imposing bunches, as is their usual practice. Their bunch of H.T. Lady Battersea, for instance, comprised over fifty well-developed flowers and buds. Amongst others shown were Madame Jules Grolez, Alistair Stella Gray, Crimson Rambler, Camoens, Liberty, Madame Pernet Ducher, Marquis de Salisbury, Madame Ravary, W. Allen Richardson, Killarney (rather weak), and the beautiful semi-double H.T. Dawn.

#### Amateurs and Gardeners.

Classes 3 to 6 and 9 to 11 were reserved for amateurs and gardeners, and when the names of the prizewinners, as given hereafter, are scanned the high merit of the collections will be taken for granted. Thus, for instance, we find the redoubtable Mr. E. B. Lindsell, Bearton, Hitchin, leading for two dozen singles with an even lot, comprising Duke of Wellington, almost perfect in form and finish, and winning the N.R.S. silver medal for the best H.P. Alfred Colomb and Horace Vernet were each

charming, but all the light-coloured Roses were below par. Mr. O. G. Orpen must have closely followed his successful antagonist, and his set were really good. Killarney was here ideal, and fine representative blooms of Bessie Brown, Mrs. John Laing, and S. M. Rodocanachi were also included; while Mr. R. Foley Hobbs, Worcester, though distinctly behind his leaders, still showed strongly. Bessie Brown showed up well, and so did Mrs. J. Laing. Seven entrants contested for honours, the aggregate of blooms here being 168.

Mr. Lindsell was again foremost for a dozen varieties in threes, and the blooms were all large and of superior merit. Mr. Foley Hobbs came second and Rev. J. H. Pemberton, Romford, followed as a close third, there being little to choose amongst the three.

For twelve Roses, distinct, Mr. O. G. Orpen beat Mr. E. M. Bethune, Horsham, and third Miss Beatrice Langton, Hendon, there being six collections. In Class 6, for half a dozen flowers, Mr. G. H. Baxter, Hutton Park, Brentwood, took the lead, Mr. Herbert E. Molyneux, of Balham, coming second.

#### TEAS AND NOISETTES.

Competition was again keen in Class 9, for the dozen distinct Teas and Noisettes, the premier honours falling to that king of the amateur Tea growers, Mr. O. G. Orpen, with the best set in the exhibition. He included Maman Cochet, Muriel Grahame, Mrs. Edward Mawley, White Maman Cochet, Medea, Catherine Mermet, Comtesse de Nadaillac, Souv. de S. A. Prince, Ernest Metz, Innocente Pirola, Madame Cusin, and The Bride. The Horsham grower, Mr. Bethune, made a capital second, and third Mr. Lindsell. Mr. Hobbs beat Mr. Baxter for the half-dozen Teas, and in Class 11, for the same number of varieties in trebles, Mr. E. M. Bethune led with good blooms, beating Mr. O. G. Orpen, who had Mrs. Mawley in fine form; and third, Rev. F. R. Burnside, Great Stambidge Rectory. The blooms were all superior.

#### DECORATIVE ROSES.

For twelve bunches of decorative Roses Mr. Pemberton just managed to lead against Mr. Orpen, and third came Miss B. Langton. The best vases were those of H.T. Gustave Regis, H.T. Liberty, R. macrantha, R. multiflora grandiflora, Lady Penzance, H.S.B., R. mosehata, and the old Red Provence.

#### Open Classes.

For twelve blooms of any dark Rose first came B. R. Cant and Sons with A. K. Williams, and second R. Harkness and Co. with Fisher Holmes, Messrs. F. Cant third with the same variety. For a dozen light Roses Mr. Orpen led with perfect blooms of White Maman Cochet, the best bloom here securing the N.R.S. silver medal for Teas, and, indeed, this was a perfect Rose. Messrs. F. Cant came second with Bessie Brown (fair); and third, Mrs. J. T. Thompson, The Laurels, Bounds Green, N., with Mrs. J. Laing. Messrs. Prior alone entered in Class 14, for a dozen of a yellow Rose, staging Maréchal Niel; but five competed in the next class, for a dozen trusses of any Tea or Noisette, Mr. Lindsell winning with a selected twelve of Madame Cusin, of grand form, deep colour and substance, but marked here and there on the lower petals. With Maman Cochet Mr. Bethune was a strong second, and Mr. Orpen third with White Maman Cochet, lacking in size.

#### Local Classes.

The local classes were all but a failure.

#### Miscellaneous.

Mr. William G. Hatch, Cromwell Road Nursery, Prittwell, staged Sweet Peas in variety, but too crowdedly and without much taste. Messrs. F. Cant and Co. had an exhibit of their new Gold Medal Tea Rose Lady Roberts.

### National Sweet Pea, July 15th and 16th.

Rosarians debate on the advisability, or the opposite, of holding a two-days Rose show, and yet the Rose lasts equally as well as the Sweet Pea; and we find the N.S.P. Society extend their exhibition to two days. In the case of the baskets and other floral designs done in this flower, the result is very pitiful about mid-afternoon on the first day, but otherwise the exhibits remain passably fresh. Held within the Royal Aquarium at Westminster, on Tuesday and Wednesday last, the show was in every way a great success. The flowers were good on the whole, and particularly so in Classes 7 and 8. A number of seedlings and novelties were noted here and there, particularly bright being Burpee's New Countess, lighter than either Countess of Radnor or Lady Grévil Hamilton. Countess Spenser, which received a certificate last year, was shown splendidly by Mr. Silas Cole; it is one of the finest half-dozen Sweet Peas.

Much regret was expressed at the unavoidable absence of Mr. Henry Eckford, who had intended to fill a whole table, but had had to wire from Wem on the Monday to cancel his entry. A

local storm may have dealt destruction to the fine collection at Wem, and if that were so we heartily sympathise with the firm in their unfortunate position. At the luncheon one of the speakers drew attention to the confusion of names already observable. In the interests of the trade as a whole, this matter should at once be checked.

#### Open to All.

The leading class in the open section enticed four competitors to test their skill as growers and exhibitors, and so good was the general mass that perhaps a more central position might have advantageously been furnished for the long table. The leading place was captured by Mr. W. Simpson, gardener to R. C. Forster, Esq., J.P., The Grange, Sutton, who staged his brown coloured vases upon wood blocks. These were of three sizes, those at the back being about 1ft high, and the second set 6in; the front row were less still. We still persist in thinking glasses would enhance the beauty of such displays. Mr. Simpson's flowers were of good quality all through, the number of sprays in each vase being limited by the rules of the schedule to one score. The admixture of colour was wonderfully effective, and certainly to secure good contrasts or harmonies is an art in itself, and demands considerable exercise of judgment. In the back row he staged Salopian, Hon. Mrs. E. Kenyon, Black Knight, Triumph, Mrs. Sankey, Countess of Radnor, Chancellor, Lady Ormsby Gore, Monarch (very good), Royal Rose, Blanche Burpee, and Lord Rosebery. Second row: Lady G. Hamilton, Lottie Hutchins (good colour), Mars, Prima Donna, Emily Eckford, Queen Victoria (very sweet), Miss Willmott (one of the best), Princess of Wales, Prince of Wales, Lady Nina Balfour, Captain of the Blues, and Aurora. Front row: Prince Edward of York, Hon. F. Bouverie, Gaiety, Sadie Burpee (rather poor), Miss Dugdale, Senator, Lovely, Lady Mary Currie (runs Miss Willmott), Dorothy Tennant, Emily Henderson, Lottie Eckford, and the brilliant Gorgeous. Jones and Sons followed second, but theirs lost the rich effect of Simpson's; and third, Mr. L. Brown.

The second class to us was unattractive, for there was a great lack of that exquisite grace which Sweet Peas can present when arranged in glasses lightly and loosely over a white cloth or white paper. Messrs. Isaac House and Son, Westbury-on-Trym, Bristol, were placed first, and their flowers, with an accompanying abundance of foliage and stem, were good in themselves, being deeply coloured, large in size, and of fine substance. Yet surely the "mist" of Gypsophila was too heavy? Their best bunches were Lord Rosebery, mauve-cerise; Golden Rose, a washy colour; Miss Willmott, bright scarlet cerise; Gracie Greenwood, salmon pink; and Burpee's New Countess, after Countess of Radnor type and colour. Geo. Gordon is another distinctive flower. Messrs. Jones and Sons, Shrewsbury, with a very poorly staged collection, followed second, having Miss Willmott, America, Emily Eckford, Mars (not unlike Geo. Gordon), and the lovely salmon red Countess of Powis as their best. Little Dorritt, with standards too much notched, was nevertheless very pleasing, and Lovely indeed well deserved its name. The succeeding award fell to Mr. L. Brown, Brentwood.

The dozen distinct bunches succeeding the foregoing class brought four entrants, and Messrs. Jones' efforts, which gave them the leading place, was infinitely to be preferred to the dull and sparse disposal of the flowers in Class 2. The bunches here were large and spread out in a loose and free manner, with a minimum of foliage, and glasses were used in place of dark earthenware vases. The selection is worth naming, which we do as follows: Prince of Wales, Jeannie Gordon, Hon. Mrs. E. Kenyon, Black Knight, New Countess (very telling), Miss Willmott, White Seedling (large and meritorious), Mars, Duke of Westminster, Venus, Puck Friar, Baden-Powell (the deep violet blue), and Duke of Westminster. The second place was accorded to Messrs. I. House and Son, whose flowers were good, but the superabundance of greenery destroyed their fullest effect. Coccinea they staged in splendid style, and when seen at its best this is a handsome flower. The New Countess is seen to be a bright lavender, and one of the most graceful of the quieter coloured Peas. Gracie Greenwood was here again most pleasing, and very sweet indeed. It is one of the best exhibition Sweet Peas. Third in the lists came Mr. Chas. W. Breadmore, seedsman, 120, High Street, Winchester, and a showy set he had. His Miss Willmott was better coloured than any we saw, and it would be interesting to learn the kind of soil and the amount of sunshine Mr. Breadmore's plants enjoy. Lord Rosebery is large and rich, and so was Duke of Westminster, which shone in purple and violet. He was weak in really good light Peas, and larger bunches and better staging would have helped him forward.

#### Trade Excluded.

The fourth and fifth classes between them drew nine competitors, the aggregate of bunches being 264. For thirty-six distinct sorts in bunches, Mr. F. J. Clark, Wistow Hall, Leicester, was first; Mr. F. Ackland, Hapsford House, Frome, second; and third, Mr. C. Osman, South Metropolitan District School, Sutton. A fourth went to Mr. T. Leith, Basingstoke.

For two dozen bunches, the Rev. L. Knight Smith, Brighstone, Isle of Wight, beat Mr. F. J. Clark; third, Mr. T. Stanton,

Sion Hill Place, Bath; and fourth, Mr. J. G. Ward, High Street, Brentwood.

Twelve bunches distinct (class 6), first, Mr. Silas Cole; second, Mr. G. Hughes, of Kingston; and third, Mr. Aubrey Hooten, College Road, Epsom, there being fourteen entries, and nearly all of them highly superior. For nine ditto, Mr. H. A. Needs led the way; second, Mr. E. Beck, Sherborne House, Hoddesden; and third, Mr. S. Cole. The latter also led for the half dozen, followed by Rev. L. Knight Smith and H. A. Needs, out of thirteen in this order.

#### Twos, in Distinct Colours.

The succeeding classes were for two bunches, each in distinct colours. We give the first prize winners only. Class 9, two of white, six entries, House and Son, with Sadie Burpee, and a white seedling. Scarlet or crimson, Mr. C. W. Breadmore, with Mars and Salopian. Yellow or buff, House and Son, with Hon. E. Kenyon and Lady Ormsby Gore. Pink, Mr. Silas Cole, with Prima Donna and Countess of Spencer. Rose, House and Son, with Lord Rosebery and Jeannie Gordon. Mauve, House and Son, with Burpee's New Countess and Lady Grisel Hamilton. Blue, Mr. J. Watson, jun., Orford House, Ham Common, with Emily Eckford and Captain of the Blues. Striped, Mr. F. Brewer, of Bickley, with America and Princess of Wales.

A class was provided for Cupid Sweet Peas in pots, but "Cupid" was not at home; no entries.

#### Floral Decorations.

Seven joined in Class 18 for the decoration of a dinner table (6ft by 3ft). The majority were pleasing, but nearly all were overcrowded. Mr. H. A. Needs led, and Mr. F. H. Barnes, Hornchurch, Essex, was second. In Class 19 for the same, open to all, Mr. D. B. Crane, of Highgate, was first; and second, Jones and Son, Shrewsbury. In the next two classes the latter were first, viz., for an epergne and a basket, eight competing in both cases. Miss C. B. Cole, of Feltham, won for a bouquet of Sweet Peas out of nine; and Mr. Leonard Brown, Brentwood, was first in Class 23 with a cross. For three buttonholes Mr. C. W. Breadmore beat his six rivals. Four entered for two vases of Everlasting Peas, Miss F. Harwood, of Colchester, beating Mr. R. Dean.

#### Non-Competitive.

We cannot describe all the trade exhibits. Sweet Peas do not vary so very much, and the same varieties are found in all the stands.

Messrs. Dobbies and Co., Rothesay, N.B., had the largest group, which was excellently arranged. Mr. Jones, of Lewisham, and Hobbies, Limited, arranged theirs at the west end of the hall, under the organ, both being imposing features. Jones and Son, of Shrewsbury, were forward, and so were Isaac House and Son, E. W. King and Co., Geo. Stark and Son, Great Ryburgh; J. Peed and Son (with hardy flowers as well); and J. Williams, of Ealing.

#### Medals.

The following awards were accorded to non-competitive exhibits. Messrs. Dobbie and Co., Rothesay, large Gold Medal; Gold medals to H. J. Jones, Ryecroft, Lewisham, S.E.; Hobbies, Limited, and Jones and Sons, Shrewsbury. Silver Medals to King and Co., Coggeshall; I. House and Son, Bristol; G. Stark and Son, Great Ryburgh; J. Peed and Son, Norwood; and J. Williams, Ealing. Mr. Towell received a commendation.

#### R.H.S., Scientific Committee, July 8th.

Present: Dr. M. T. Masters (in the chair); Messrs. Druery, Hooper, Saunders, Worsdell, and Elwes; Drs. Rendle and Müller, Prof. Boulger, Rev. W. Wilks, and Rev. G. Henslow, Hon. Sec.

*Beech Trees with Phyllaphis.*—Mr. Saunders reported as follows upon the communication received from Mr. White: "The insect is *Phyllaphis fagi*, which infests the lower branches more than the upper. They feed on the under side of the leaves, and the honeydew which they deposit falls on the leaves below. The pest may be destroyed on a small tree by spraying the under sides of the leaves with paraffin emulsion."

*Clubbing and Gas Lime.*—Mr. Wilks described his experience with gas lime as a remedy, without success. Three inches in depth were dug in last November. Cabbages were planted in March, and grew well at first, but proved to be very badly affected. Mr. Saunders undertook to examine the roots.

*Athyrium attacked by Grubs.*—Mr. Druery exhibited specimens attacked by some maggot, which ate the interior of the rachis. Mr. Saunders undertook to examine them.

*Digitalis malformed.*—Mr. Holmes exhibited a spike in which the corollas were split and the segments antheriferous. A similar monstrosity was described by Rev. G. Henslow in "Journ. Lin. Soc." vol. xix., p. 216.

*Pear diseased.*—Mr. Hooper showed specimens of Pears, apparently attacked by some fly, with leaves blistered by the *Phytoptus pyri*. Mr. Saunders reports that they are attacked by the grubs of the Pear



Midge, *Diprosis pyrivora*. It lays its eggs among the stamens, and the grub feeds on the young fruit. The chrysalis is found about an inch below the ground. 1½ in. of soil should be pared off and burnt, or the surface soil may be buried 5 in. deep.

*Crinum* sp.—Mr. Elwes exhibited an umbel of very fine flowers, which have the perianth white, with a median crimson stripe. It came from Brazil, and it appears that Mr. Goodman found it also in Jamaica. He suggested that it might be *C. Kirkei* from Zanzibar. Mr. Elwes remarked upon the wide diffusion of several African bulb plants in the last century.

*Iris malformed*.—Mr. C. T. B. Crews, of Wokingham, sent a specimen with double flowers. Dr. Masters undertook to examine it.

*Leucadendron malformed*.—Mr. Henslow showed an inflorescence in which, instead of flowers, the peduncles were covered with bracts like the "wheat-ear" Carnation. It was from a bush growing on the flanks of Table Mountain.

*Apple-leaf Blister*.—In reply to Mr. H. F. Gettling's inquiry, Dr. M. C. Cooke observes that this is as great a mystery as ever, as there is no trace of fungus. There are abnormal tufts of hairs, probably induced by minute insects. Further observations on *Erineum pyrinum*, a possible cause, will appear in the "Journ. Hort. Soc."

*Stameniferous Fig*.—Mr. Henslow called attention to the variety Pingo de Mel, from Portugal, which is an exception to the rule that nearly all edible Figs are female, while this bears stamens, though without pollen. The female flowers had globular ovaries (gall-flowers), so that it appeared to be an edible variety of the *Caprificus*, or wild Fig, which is always infested by the minute wasp, *Blastophaga grossorum*.

*Sycamore Fig*.—Mr. Henslow showed specimens of this Fig which is always infested with *Sycophaga crassipes*. To remove them, the Fig is cut open by a peculiar hook-shaped instrument; the process also causes the Fig to acquire great sweetness. The Figs are only cut open and eaten by the poorer classes in Egypt, but the process is the same now as described by Theophrastus in the 5th century B.C. Three forms of Fig-cutters were shown.

*Apples diseased*.—Mr. Saunders observed on some small Apples shown, that they had been attacked by some insect, probably the Apple sawfly, *Hoplocampa testudinea*. When mature, the grubs bury themselves, so that not only should all the little Apples that fall naturally or when the tree is well shaken, be burnt, but the surface soil should be burnt or buried deeply. The soil should be dressed with kainit (½ lb. per square yard) between the middle and end of June, just before or after rain. If very dry, the dressing should be watered.

## The Cucumber Supply.

Attention to routine operations is important for the continued bearing of the plants. The growths should be thinned as occasion requires, looking the plants over twice a week, it being easy to rub off a starting shoot in the wrong place, or one for which there is no room, and the points of unruly growths may be nipped off without prejudice. It is different when the manipulations are distant, then the amount of trimming is considerable, the wounds are correspondingly large, and the foliage impaired by the previous crowding and afterwards sudden exposure. This is how Cucumbers are weakened and less able to contend with their enemies.

Remove exhausted growths to make room for young bearing shoots. Keep the shoots well stopped to one joint beyond the fruit, or at the fruit if the plants are vigorous and showing no signs of exhaustion. Always allow weakly plants more extension, and crop them lightly. Remove bad leaves as they appear, always having an eye to the first speck of abnormality on the foliage, whether caused by red spider, thrips, white fly, or mildew. These pests have an abhorrence of sulphur, especially the fumes which are given off more or less under the solar heat acting on surfaces more or less coated with the flowers of sulphur. Mildew spores are just now very abundant in the atmosphere, many wild plants being quite white with the over-spreading mycelium, erect hyphæ, and shed conidia. Have an eye, therefore, to Cucumber plants, preferably dusting a little sulphur on the plants, or where the sun can act on it, as a precautionary measure. Maintain a steady root action by top-dressings of fresh compost from time to time, and sprinkle on a little fertiliser occasionally. Secure a top heat of 65deg to 70deg at night, 70deg to 75deg by day, 80deg to 85deg in the sun, closing early to increase to 90deg, 95deg, or 100deg. Syringe in the afternoon of hot days, avoiding late syringing, for the foliage should be dry before sunset so as not to be unduly prejudiced by incumbent water. Commence ventilating, it being important that the foliage be dry before the sun acts powerfully upon it. Shade over to prevent scorching and flagging. The

plants for autumn fruiting should now, or soon be, placed on hillocks or ridges moderately firm, maintaining a moist, genial atmosphere, and they will soon grow sturdily and show fruit abundantly.

I would now allude to a parasitic fungus, *Cercospora melonis*, which riddles the leaves into holes and destroys them, also infesting the foliage of Melons. It is not by any means new, but has only recently been certified as a determinate parasite on Cucurbitaceous plants. It produces or causes dry brownish spots to appear on the leaves and often on the petioles and stems. The spots or blotches are of irregular form, often running together and involving the whole leaf. It is most abundant in damp weather, and on structures kept very close and moist, and spreads with astounding rapidity. Spraying with a solution of permanganate of potassium, 1oz of the crystals to 3 gallons of water, arrests the disease, not only treating the plant but also the soil. The solution, however, discolours white paint, still the parasite must be combated. Probably the disease is accelerated by the moist and close conditions under which Cucumbers are grown, for where plenty of air is admitted the parasite makes little progress.—G. A.

## February Savoys.

In the garden Savoys are considered an important autumn and winter crop, and justly so; for when the summer vegetables are over, and cold takes the place of solar warmth, something of a hardy nature is at once called into use to take up the succession. Their employment is not justified so long as other autumn vegetables are holding out; indeed, a common expression is that Savoys are not in condition until they have been seasoned with frost. It is thus clear that weather influence, at one stroke as it were, switch one section off and the other—the winter one—on. While there is a natural pride and satisfaction in the maturity of a good breadth of this winter vegetable by the time frosty nights become the rule, there does not seem the same keenness in providing for the later months of the winter. True, Savoys become tiring to the palate after a use of three or four months, but Savoys are, I find, particularly useful in February, when they are available, and this is specially true should there have been severe weather up to that time. Savoys which have become full-hearted by the end of October will not long endure bad weather without decay. With much rain, too, they burst badly, which expose them to untoward weather not without ill consequence.

A succession of Savoys for three or four months imply a necessity of sowing at intervals during May and early June. Many sow in April, some even in March; but there is no necessity of so early a start, because there is often no space for planting them in private gardens when raised thus early, and no demand for them when ready at an early period of the winter. The June sowing is that which is most likely to provide for February, and if they have a value at that time they should receive some encouragement in their advance from the seed bed, and an open site where they may grow sturdily and hardy. From this late sowing they may appear disappointing when compared with the early winter stock, but it is somewhat remarkable how apparently unsatisfactory plants in November develop by February, given normal treatment and wintry weather. I have often chafed when these have passed under review in late autumn, fearing that their edible qualities will not satisfy later; but almost invariably this passes off, and an element of satisfaction takes its place when earlier beds are cleared off and there yet remain material for daily use.

While the full-hearted Savoy succumb to severe frost or heavy rains, these unmaturing plants progress unscathed, a point that it is well to bear in mind both at sowing and planting times. I have often seen Savoys being planted when my seed yet remained unsealed in the packet, but I have not found that the early "racers" served a better purpose or supplied more useful material in bulk or quality than when less time is meted out to them. When severely stunted in the seed bed awaiting an opportunity for planting they are a long time in making a start. With this procrastination in evidence the younger unstarved plantling gets a footing and is soon well on the road, keeping pace or even superseding its older companion in the race for time.

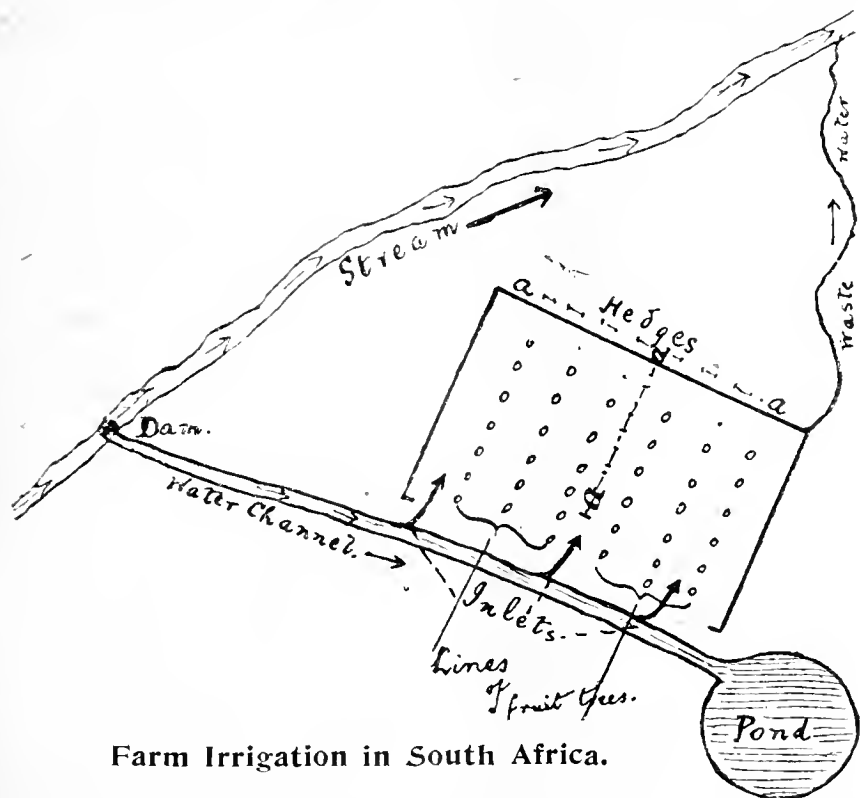
A variety I have found reliable for late cutting is Sutton's New Year. It is reliable because hardy, and is accommodating because late planting is made a necessary condition. Pressure of space often keeps strong plants in the seed bed doing themselves more harm than good, to say nothing of the great labour involved in their planting. As ground is cleared of successive summer crops it becomes available for these late winter ones.—W. S.

## Notes from the Transvaal.

The following letter from a soldier, we feel sure will be read with much interest:—

"I received your letter dated May 18. By the time you receive this, I hope we will have orders for home. The burghers are coming in all right, and one of Kemp's commando was telling me that there would be close on 20,000 when they all came in, which time will tell. Most of them are very hard up for clothes and boots. I was speaking to some of Delaray's mob, and they all give Methuen a very good name, and say his capture was a piece of misfortune. One old man gave us cigars and said he would fight for Britain any time after this. They all seem to be glad the war is over. One said that they get on best with Scotchmen—as Scotchmen pick up the Dutch (or rather Taal) language very quickly.

"The way the old Boer farmers do with the Kaffirs is to allow the latter so much land to grow whatever they like in return for their labour on the farm. Most of the farmers are content with growing a few mealies (Indian Corn) and Pumpkins, and sometimes Tobacco. Most of them build their farms near some stream or spring, and generally build a big dam to throw the water into the channels made for irrigation purposes. Very few have windlasses, as they are expensive and the Boers are not a progressive lot. Most of the houses have draw-wells next to



Farm Irrigation in South Africa.

them, and the farmers don't seem to have to sink them far to get water. I see our Government had a lot of experts out here to report on the best methods of irrigation.

"About six months ago I saw in the 'Bloemfontein Post' a prospectus of a company being formed to pump water from the Orange River to the Karoo desert in Cape Colony for vineyards, &c. I prefer either Natal or the Transvaal to Orange River Colony or Cape Colony for anything either in farming or other industry. In the Western Transvaal are found splendid agricultural districts, especially round by Rustenburg. Near by Pretoria the districts are rich in minerals, and this continues so right up to Middelburg. In the 'New Scotland' district round by Botheville and Steynsdorp in E. Transvaal we passed a number of splendid farms, mostly owned by Scotchmen. Most of the soil seems to be very sandy in all parts of the country.

"The great drawback, according to my idea on farms out here, is the scarcity of good grazing during the winter. The grass gets burned and withered, and has no substance whatever, and affects stock greatly. Cattle grow to an enormous size, however, and with nothing but the simple grazing to fatten them. I have seen some draught oxen which I am sure would weigh nearly 16cwt or 18cwt. Of course I may be mistaken, but I think an average bullock at home is about 10cwt or 11cwt, and I was judging by appearances. Farmers out here have to spend considerable sums on fencing, and a great many use slabs of stone instead of wooden posts. Others plant rows of trees, as ants leave growing trees alone. Round gardens or orchards they generally make hedges of Prickly Pears (*Opuntia vulgaris*) or Quince bushes. The most general wage out here for mine employes, tradesmen, &c., is £1 a day. Prices for lodgings vary, but in Johannesburg and Pretoria they are much the same, and generally range from 30s. a week upwards. A suit of clothes costs about £6 or £7. One is a great deal better off at home with 30s. or 35s. a week than with £1 a day out here. With these few notes in the meantime I conclude.—W. D., Pretoria, Transvaal, South Africa. June 15, 1902."



## Fruit Forcing.

**PEACHES AND NECTARINES: EARLY FORCED HOUSES.**—Trees of Alexander, Waterloo, and Early Louise Peaches, Advance, Cardinal, and Early Rivers Nectarines, will now, or by the end of the month, have the buds sufficiently plumped and the wood matured to admit the roof lights being removed. This is a commendable practice, as it prevents over-maturity in the buds, lessens the danger of their dropping, and the trees are cleansed and refreshed by the dews and rains in the autumn. Where the lights are not moveable air should be admitted constantly to the fullest extent, the border properly watered, and the trees syringed occasionally, so as to keep the foliage free from red spider. The second early varieties, such as Hale's Early, A Bee, Early Alfred, and Dr. Hogg Peaches, Lord Napier, Darwin, and Rivers' White Nectarines, which were started at the new year, will not be so forward, and the mid-season varieties, Stirling Castle, Royal George, Dymond, Noblesse, Grosse Mignonne, and Bellegarde Peaches, with Stanwick Elruge, Humboldt, and Dryden Nectarines, will be later still, but all cleared of their fruit. Wood in which the fruit was borne will have been removed, reserving extensions; all superfluous growths have also been cut away, so that the trees have the full benefit of light and air by the foliage being fully exposed, influences essential to forming and perfecting the blossom buds and the thorough maturation of the wood. Syringe the trees and cleanse them of insects if necessary by the prompt application of an insecticide, and supply water, or in case of weakly trees, top-dressings of artificial fertilisers washed in, or liquid manure at the roots. Mulching will also tend to keep the roots active at the surface and prevent the premature ripening of the foliage. Admit air to the fullest extent. When buds are plumped and the wood hard and brown where exposed to the sun, the roof lights may advantageously be removed.

**SUCCESSION HOUSES.**—Trees started in February and being of the approved standard second early and midseason varieties, which are much better than the very early sorts for general cultivation, have the fruit ripe and ripening. As the sun acts fiercely on the apex of the fruit it often ripens or even shrivels these before the lower part becomes soft. To obviate a slight shade from powerful sun is an advantage, preventing the defect mentioned and insuring more even ripening. As the fruit is cleared off the trees, cut out the wood that has borne fruit and then the growths where too close, or where the foliage cannot have the essential exposure to atmospheric influences. Cleanse the trees of dust and red spider or insect pests by means of the syringe or engine, if necessary using an insecticide. Keep the border thoroughly moist, feeding trees that have carried heavy crops or are at all weakly. Avoid, however, making the soil sodden by thick and heavy applications of liquid manure, or inducing growth by too abundant top-dressings of the advertised fertilisers. Stop laterals to one joint, or allow a little extension if the trees are weakly or have the buds in an advanced state, thus preventing the foliage ripening prematurely by continuing the root action with growth. When the buds are well formed the roof lights may be removed in showery weather, and where this cannot be done the fullest amount of air should be given. The exposure to rains and dews has an invigorating effect, doing no harm except where the trees are too vigorous and the wood ripening unkindly.

**HOUSES WITH FRUIT SWELLING.**—Trees started in March have the fruits in a forward condition where they have stoned satisfactorily, as they do when the growth is not too luxuriant or improperly formed and matured. The leaves overhanging the fruit should be drawn aside, and depending specimens raised by means of laths placed across the trellis wires so that the apex will be to the light. Water the borders copiously as required, and feed with liquid manure or top-dressings of the advertised fertilisers washed in. Keep the surface mulched with short, sweetened, or spent manure in a lumpy state, just a little to keep the surface uniformly moist and encourage surface roots. Avoid a thick mulch of material likely to form a close soapy mass and exclude air. Ventilate early; in fact leave a little air on constantly, syringing by 7 a.m., and through the early part of the day ventilate freely. When the sun commences to lose power in the afternoon reduce the ventilation, and raise the temperature to 85deg or 90deg by its agency about 4 p.m., with a good syringing and damping, but it must be done with judgment, for when the water hangs for any length of time on the fruit during the last swelling process it is liable to damage the skin, causing it to crack, and giving the fruit a



musty flavour; therefore have the fruit dry before nightfall, and when the day is likely to be dull omit the morning syringing. Directly the fruit commences ripening cease syringing, but afford air moisture by damping the paths and borders in the morning and afternoon, ventilating rather freely in the daytime, and sufficiently at night to insure a circulation of air.

**LATE HOUSES.**—In order to assist the swelling of the fruit observe the conditions advised in the preceding paragraph. If wanted to accelerate the ripening ventilate rather freely in the early part of the day and up to 1 p.m., then keep the heat obtained by reducing the ventilation so as to secure 80deg to 85deg, and at about 4 p.m. close the house, syringing well, and no harm will come if the temperature rise to 90deg, ventilating about 6 p.m., so as to let the pent-up moisture escape and the temperature gradually cool down. Keep the shoots tied down as they advance, allowing no more than are necessary for next year's bearing or for furnishing the tree. Let all have space for development, with full exposure of the foliage to light and air. Keep laterals stopped to one leaf, also retain growth to attract the sap to the fruit. If there are any gross shoots which push laterals from the leaf buds, cut them back to where the buds remain intact, or if likely to derange the equilibrium of the tree and the equalisation of the sap, cut them off altogether, as they only tend to promote gumming, imperfect setting, and certain casting of the fruit in stoning. Draw the leaves aside or away from the fruit, and let it have as much light as possible, the sun acting directly on the apex. This will be uppermost when the fruit is put up for sale or dislied, hence the necessity of having the chief colouring there, and as the colouring is so is the flavour in the case of Peaches and Nectarines.

**UNHEATED HOUSES OR WALL CASES.**—Where there are early varieties in these structures, such as Alexander, Waterloo, Early Louise, and Early Rivers Peaches, Cardinal and Advance Nectarines, the fruits will be ripening. These should not be syringed, but the trees must not lack water at the roots, and the borders should be damped, as moisture is necessary for the health of the foliage. Afford top-dressings of the advertised fertilisers washed in, or supply liquid manure from tanks properly diluted, adding about 4oz of superphosphate to each gallon of strong liquid and diluting this with five or six times the bulk of water. House sewage may be used for this purpose, and its unpleasant smell may be subdued by using 1lb sulphate of iron to 10 gallons of undiluted sewage, this afterwards being diluted five or six times with water, mixing well a few days before use. This will convert the sewage into a more or less double sulphate of ammonia and iron, the latter being ammoniated, and then it loses any deleterious properties it might otherwise have in the large amount given. Iron is an essential plant food, but often worse than useless on the soil for lack of nitrogenous matter for ammoniation. Even without the direct application of the sulphate the sewage causes the foliage to assume a dark glossy hue, and this—the amount of chlorophyll in the leaves—practically determines the colour (when properly exposed to the light) and quality of the fruit. Keep the growths thin, every shoot having space for development and proper exposure to light and air. Syringe about 7 a.m., the house having a little air constantly; increase the ventilation with the advancing temperature, contriving to have it full at 75deg, or if it is desired to accelerate the ripening keep through the day at 80deg to 85deg, but always with ventilation, and close early to maintain the temperature, but not to raise it above 90deg. Syringe again in the afternoon about 5 p.m. This attended to, and the operation being effective, there will not be any red spider, the roots being well supplied with water and nourishment. Timely thinning increases the size of the fruits retained, and having been attended to early the fruit is a good size by the time the stoning is completed, when the final thinning should be given. It is a mistake, however, to leave many more for stoning than will be ultimately allowed to ripen, for it is really the stoning that is the exhausting process.—**ST. ALBANS.**

### Kitchen Garden.

**BROCCOLI.**—Early mid-season and late Broccoli plants ought all to be planted in the course of the present month, dealing first with those varieties intended to come into use in late autumn and early winter. Broccoli likes stiff, firm, but good ground, as in such soil the most desirable growth is made which is able to withstand the rigours of any untoward weather which may occur. Such plants produce thick substantial leaves, which are able to fold well over the centres and enclose the flower head as it develops. With such leaves and thick woody stems the plants are sure to be productive sooner or later. The best plants are those which have been gaining strength in nursery beds where they were pricked out previously for that purpose, but plants thinly grown in the seed beds are also suitable ground, for Broccoli ought to be selected in an open position. That which was liberally manured and dug in the spring, and is now firm, is the best, but any rich and fertile ground, however firm, can be utilised. Of course it is more difficult to insert the plants

where the ground is hard, but Broccoli does well even when inserted with a crowbar, watering the plants with liquid manure to afford them a start. Carefully pricked out plants are usually furnished with a mass of fibrous roots with soil adhering which it is desirable to retain; therefore, form a trench with a spade, place the plants at the proper distance therein, and make the soil as firm as possible about them. The distance between the rows should not be less than 2ft, and need not exceed 30in, the plants being 15in to 18in apart. Give surface cultivation by hoeing to keep down weeds and encourage growth.

**SAVOYS.**—A good breadth of Savoys ought to be planted forthwith, as upon the whole they are a most useful vegetable, supplementing and extending the supply for a long period. The small, compact varieties come into use early. The medium-sized and the larger sorts are invaluable during hard, severe weather, when other green vegetables may be scarce, while of course they are equally serviceable as a change during mild periods. Plant as good a selection as possible. The smaller varieties may be planted closer together than the larger. Some will do a foot apart in the rows, and that distance between the rows.

**CAULIFLOWERS.**—These and Cauliflower Broccoli, which come into use in autumn, must be encouraged with copious waterings of liquid manure. Remove yellow and decaying leaves.

**TOMATOES.**—Afford systematic and regular attention to Tomatoes growing against walls and fences. One or two main stems to each plant are ample, dispensing with the side growths, which appear in the axils of the leaves. Strong plants must be kept moist at the roots, and as roots of a fibrous character multiply, and bunches of fruit set and swell, the need for a mulching of manure will be apparent. In addition the plants must be assisted to support the increasing burden of fruit by applications of liquid manure, weak in character at first, but increasing in strength as the crop becomes heavier. Denuding the plants of foliage to a large extent is a mistake, until the foliage turns yellow and is useless. It is far better to encourage root action, and give ample support, then the crop will be satisfactory.

**CUCUMBERS IN FRAMES.**—With continued cropping and growth the plants become to a certain extent overcrowded and somewhat exhausted. It is a good plan, therefore, to go over the entire frame, cutting out the exhausted growths and yellow leaves, also any weakly growths, and regulate afresh. This will give an opportunity to top-dress with a mixture of good soil, having a dash of artificial manure in it. A fresh impetus to growth will thus be given, and the plants will produce fruit abundantly again, especially if the conditions which favour healthy growth are maintained, namely, a moist atmosphere.—**EAST KENT.**

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.        | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|--------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|              |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|              |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.        |                    |                         |           |           |           |             |                                       |                |                |                              |
| July.        |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ... 6 | E.S.E.             | deg. 67.9               | deg. 62.6 | deg. 79.3 | deg. 58.9 | Ins. —      | deg. 63.9                             | deg. 60.2      | deg. 56.8      | deg. 52.5                    |
| Monday ... 7 | E.S.E.             | 72.9                    | 66.0      | 80.2      | 57.0      | —           | 64.5                                  | 61.0           | 56.8           | 46.3                         |
| Tuesday... 8 | S.                 | 74.9                    | 60.9      | 82.5      | 56.2      | —           | 64.5                                  | 61.4           | 56.9           | 42.2                         |
| Wed'sday 9   | W.S.W.             | 65.2                    | 61.6      | 72.2      | 59.5      | 0.21        | 65.1                                  | 61.8           | 57.0           | 48.9                         |
| Thursday 10  | S.W.               | 59.9                    | 54.6      | 65.2      | 52.2      | 0.52        | 64.0                                  | 61.5           | 57.2           | 40.0                         |
| Friday ...11 | N.W.               | 56.9                    | 50.4      | 62.4      | 50.5      | —           | 60.4                                  | 60.8           | 57.2           | 40.0                         |
| Saturday 12  | W.N.W.             | 59.9                    | 51.9      | 70.3      | 41.8      | —           | 59.2                                  | 60.2           | 57.2           | 29.7                         |
| MEANS ...    |                    | 65.4                    | 58.3      | 73.2      | 53.7      | Total. 0.73 | 63.1                                  | 61.0           | 57.0           | 42.8                         |

The first part of the week was very warm. Thunderstorms occurred on the 9th and 10th, since which time the weather has been dull and cool.

### Sweet Peas from Canterbury.

Mr. Geo. Mount, nurseryman, Canterbury, sends a consignment of Sweet Peas, from among the varieties of which we select the following:—Miss Willmott, bright salmon rose; Lovely, a beautiful shade of mauve-pink; Blanche Burpee, white; Black Knight, rich violet-maroon; Queen Victoria, pale tea coloured; Emily Eckford, violet-blue, and Prince of Wales, mauve-crimson. Each of these are very beautiful and distinctive.



\* \* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

### Plan of a Bothy—Competition.

"Well-wisher" promises a first prize of £3, and the Editor supplies a second prize of £1.

The rules of the competition are as follows:—The plan, drawn to scale, must not exceed 7in broad by 7in deep, and must be clearly defined on stout paper. The plan must provide suitable accommodation for six men, and the cost of the building ought not to exceed £200 to £220. A statement of the general items of cost should accompany the plans, together with any written comments thereon. The competition is open until Christmas, 1902, by which date all plans must be in the hands of the Editor. The sender's name and full address should be enclosed when sending the plan, and the sender will alone be held responsible for it.

**HYDRANGEA "SPORT" (J. Blackburn).**—As you say, the plant is a very ornamental one for pot culture. It is a distinct variety of *Hydrangea hortensis*, and is named *variegata*.

**TOMATO LEAVES CURLING (E. D'Olier).**—The most probable cause of the leaves curling is too dry an atmosphere and an insufficient supply of water at the roots, but the old leaves usually curl more or less, and some plants are more given to it, as you note, than others. Mulch with short manure, supply water abundantly at the roots, and keep the house a little closer.

**ROSES FOR GREENHOUSE (H.).**—Your request implies that you need Roses for training up the roof, but you do not say so. For this purpose we doubt if any will give greater satisfaction than *Maréchal Niel* and *Gloire de Dijon*; the best red variety for the same purpose is probably *Reine Marie Henriette*. As a rule they are far better planted in good soil than kept in pots. Two good Roses for growing in pots for forming bushes are *La France* and *Niphetos*, of which strong plants well cultivated give a wonderful quantity of acceptable flowers.

**INSECT TO NAME (East Ham).**—It is the creature known by various popular names, such as *Reve Beetle*, on account of its wandering habits and quick movements; *Cocktail Beetle*, from its custom of elevating the abdomen when alarmed or angry; and *Devil's Coach-horse*, from its blackness and sinister appearance. Its proper name is *Ocypus olens*. It is a predacious beetle, and the larva is as predacious as the perfect beetle, and when food is scarce or the appetite keen has not the slightest hesitation in feeding on its own species. It is not injurious to vegetation, but a friend of the horticulturist, as it destroys some of his worst enemies, your having found it feeding on slug being much in its favour.

**USES OF WATER LILIES (J. H.).**—The leaves and stems of these plants and their relatives are generally stringent and bitter, the roots possessing these qualities very strongly developed. The rootstocks of *Nymphaea alba*, the common White Water Lily, contain a quantity of starch and mucilage, with tannin and a narcotic principle that is removed by washing, the roots being then used as food in some countries, particularly in Sweden. We do not, however, think the petals would be very beneficial for the purpose you name. The flowers of the yellow Water Lily, *Nymphaea lutea*, are said to possess a narcotic property, and in some parts of England they are called *Brandy Bottles*, from the resemblance of their odour to brandy. In Turkey a cooling drink is prepared from them.

**RASPBERRIES FOR AUTUMN BEARING (Anon.).**—October Red is the best, withstanding wet better than most others, Large Monthly being dwarf-growing and an abundant bearer, but the fruit is not so large as October Red or Belle de Fontenay. Orange d'Automne is very large, yellow or orange, and good in flavour; but October Yellow, though less in size of fruit, is more prolific. By double bearing we presume is meant the fruit borne sometimes on the canes of the current year's growth, which is usually most common when the season is moist and the canes make vigorous growth. These have been scarce with us this season, but have been usually sufficient to give a supply as an accompaniment for Red Currants in tarts and dessert until the autumn-bearing sorts continued the supply until the approach of winter.

**GORDIUS AQUATICUS (G. U.).**—The above is the name of the singular creature which children call horsehair worms, and we suppose many thousands of horse hairs have been placed in water by them under the erroneous notion that they be converted into the worms; hence the common name that is applied to them. They are found in many parts of Great Britain, but whether "all over" it or not we are unable to say. Their distribution, however, is general, not partial merely.

**SECOND CROP FIGS—PAULOWNIA IMPERIALIS (R. H.).**—It is not possible for you to preserve the Figs, which are now larger than Filberts, on a tree in the open air so that they will ripen next year. They will all shrivel and drop off whatever you may do to secure them. Nor is it practicable to protect the flower spikes of this tree so that the blooms will expand at this late season of the year. The nights are too cold for that to be accomplished, and such buds as you have sent will shortly fall. We are not able to state definitely the cause of the brown patches on the leaves. If you have not had a shower of hail in your district they have probably been caused by the puncture of an insect. The red Apple you have sent is *Fearn's Pippin*, the other *Keddlestone Pippin*.

**FRUIT FOR AUGUST AND SEPTEMBER (Constant Reader).**—If you have a warm position out of doors we should not plant Apricots in the house, but should add the *Moorpark* to those you name, and plant against a wall with south aspect in the open air. Some of the best Plums for exhibition are *Goliath*, also called *Emperor*, end of August; *Pond's Seedling*, end of September; *Kirke's*, middle of September; *Jefferson*, middle of September; *Transparent Gage*, beginning of September; *Huling's Superb*, end of August; *Denniston's Superb*, middle of August; and *Washington*, middle of September. The exact period of ripening depends on seasons and districts; we have given the usual times of ripening in the open air near London. It is for you to determine in accordance with the climatic character of your district whether you plant any of the trees under glass or not. You may graft the *Black Hamburg*, *Alicante*, *Gros Colman*, or *Madresfield Court* on the *Lady Downe's* stock provided it is healthy.

**ROSES FOR BUTTONHOLES (S. T.).**—Tea Roses are among the most suitable for this purpose, and there are few gardens where the soil is good and the atmosphere pure in which they, with a little protection, may not be grown. Free and good are *Niphetos*, *Madame Falcot*, *Homère*, *Madame Van Houtte*, *Madame Lambard*, *Safrano*, *Perle des Jardins*, *Comtesse Riza du Parc*, *Madame Jules Margottin*, and *Souvenir de Paul Neyron*. The old crimson *China Rose* and *Cramoisi Supérieure* are good for your purpose, as also are the *Noisettes Triomphe de Rennes* and *Aimée Vibert*, with *Baronne de Maynard*, *Boule de Neige*, and *Louise Darzens*. Moss Roses are indispensable—the common, crested, *Moss de Meux* and *Little Gem* (W. Paul), the latter being very charming. Among the most free and suitable of the Hybrid Perpetuals are *Jules Margottin*, *Général Jacqueminot*, and *La France*. We have probably named sufficient for your purpose. The advisability of digging-up and planting your established Roses deeper depends on the depth at which they are planted now. If they grow and flower freely we should let them alone; if not, you might try the plan you suggest, but on this point we cannot advise, since you have not stated the length of the stocks.

**NAMES OF PLANTS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (F. M.).—1. *Dendrobium densiflorum*; 2. *Brassia Lanceana longissima*; we found but two flowers. (R. B. Halifax).—1. *Arnica montana*; 2. *Galium hybrid*, probably a cross between *mollugo* and *verum*; 3. *Allium Moly*; 4. *Campanula rotundifolia*; 5. *Orobanchus vernus*; 6. *Campanula persicifolia alba*. (F. L. Edinburgh).—1. *Crepis sibirica*; 2. *Eschscholtzia maritima*; 3. *Eschscholtzia Austineae*; 4. *Lactuca macrophylla*; 5. *Bocconia microcarpa*. (The Burns).—*Platystemon californicus* (Papaveraceae). (J. F.).—1. *Campanula lactiflora*; 2. *C. allariaefolia*; 3. *C. latiloba*; 4. *C. elegans*; 5. *C. pusilla*; 6. *C. garganica hirsuta*. (J. B.).—*Plagianthus Lyali*. (N. B. Kelso).—1. *Lilium croceum*; 2. *Hemerocallis fulva*; 3. *H. aurantiaca*; 4. *Lilium umbellatum*; 5. *Othonopsis cheirifolia*.



"All Cry and Little Wool."

"And my people love to have it so." This is the enlightened twentieth century, and it is the age of adulteration. There is not an article we use or consume which does



not afford to the unscrupulous a fine field for roguery. We have become past masters in the art, and now like evil birds our sins are coming back to roost. There is an outcry for everything cheap, and, dare we add, nasty. Where we wore fine linen and the softest of calicoes, now we resort to the wretched flannellette! We bought suits, and the first question was: "Is it all wool? Will it bear and keep this colour?" Now, if the "cut" is about right, we do not mind what sort of shoddy clothes our persons. The working man rejoiced in good serviceable fustian, now forsooth he must have a cloth suit like his employer (not his master)—the term is obsolete. It is one of the factors that keep him poor, for he has constantly to renew his garments.

Why are we so bitter just now? We are beginning to wake up a little to the fact that we are in this wool business robbing ourselves twice over. In the first place, there is no market for this great product of ours; and, in the second, by consenting to wear shoddy made garments we are effectually keeping closed our wool markets. What on earth is the use of merchants buying our wool if we are quite content with cheap substitutes? In olden days to encourage the home manufacture, the law was that all corpses should be wrapped in woollen cloth. If dead bodies needed wool, our poor living ones need it far more.

Last week we had the great Royal Show, when representative farmers gathered from the ends of the earth. We might almost use the list of names to be found in Act II., 9, 10, 11; in fact, it might be rather a long list, and among these men is a strong contingent of sheep fanciers and breeders. They have their International Conference, and this topic of adulterated wool is the first on the list of subjects for discussion. We must quote at length from the first speaker, Mr. A. Mansell, Shropshire. He says: "That in a drive of thirty miles around Bradford there are not only but scores of mills where for every bale of wool used, ten bales, and often more, are used of shoddy, mungo, stockings, and cotton, and that in the heavy woollen district of Yorkshire there are dozens of manufacturers who never buy a single bale of raw wool, and yet are known and acknowledged as influential manufacturers of woollen goods. Woollen," he says further, "may mean anything—shoddy, mungo, cotton." "All wool" is the only sure guarantee one can accept when buying would-be woollen garments. When we read of woollen stuff, 54in wide, and sold at 1s. 1d. per yard, what can we look for? If we will have such cheapness, we must be cheated. Mr. Mansell tells of an Army contractor for the supply of blankets who was found to be using 50 per cent. of shoddy.

America is just as bad, as shoddy there to the amount of 40 million rounds is displacing 120 million pounds of wool. American woollen fabrics are principally cotton! What a satire! If margarine may not be sold as butter, why in the name of all that's reasonable should woollen goods be sold as "all wool"? There are still many poor simpletons who need to be protected from fraudulent manufacturers.

What is shoddy? This is how the National Live Stock Association of U.S.A. describe it—as being the rotten, cast-off rags of European paupers, having in them all kinds and amounts of filth and disease. Dealing with the production of woollen goods from these materials, the Association writes: "To encourage such a fraud is simply putting the lousy rags of European paupers in competition with the sheep and wool growers of America and elsewhere, and robbing the consumers who wear woollen garments by selling the stuff under a misrepresentation." Those of us who live in the vicinity of seaports have heard a good deal at one time or another of the dangers arising from the importation of foreign rags. Let an epidemic break out on the Continent, then we are all for burning these wretched rags. Let the epidemic subside, and we hear no more about them, and the unholy traffic continues. At the English Conference on Saturday, July 5, one gentleman from Tasmania opined that it was the dear price of wool that encouraged this fraudulence; but really one would have thought the wool price had touched the lowest mark now, and we might have it used in a pure state. The New Zealand representative declared that, as touching this matter of inter-mixture, his country was at present free from blame.

In reference to working up the old rags into new "cloth," a writer in a daily paper recalls a fact in natural history new to us. Perhaps he is "having us," but we will quote it: "When the frog has done wearing his jacket, and crawls

out of it, he is said to roll the old one into a pill and swallow it, doubtless for the gradual manufacture into a new one. He is severely economical." This is the principle on which the great trades of shoddy and mungo have been builded up.

Our next paragraph we might head "A Storm in a Tea Cup," or, "Much Ado About Nothing." After having Free Traded ourselves practically to the verge of ruin, there has been a most tremendous and foolish outcry when, extra taxation being imperative, the trifling impost of 1s. per quarter has been put upon Wheat. It was taxing the poor man's loaf; it was a retrograde movement. The sods over Cobden and Bright had been seen to lift, and we were going back to semi-barbarism. We could hardly realise that there were men, and women too, who could talk such arrant nonsense. We have taxed the poor man beyond what he was able to bear, and so forth, and so on.

Lord Goschen has a word or two to say on the subject. He never loses his head or is carried away by passion, and he has tried to place before the public in plain figures where and how lightly the taxation will fall upon the individual. A bag of flour containing 280lb will be taxed at 1s. 0½d; a sack of flour will make 95 quartern loaves, or 380lb of bread, and the tax is thus a trifle over half a farthing on the quartern loaf. The statistics of the consumption of bread (we quote from a well-known paper) by the population of this country give an average of about 4-5ths of a lb, or 13oz per diem, and this is 9½d. per year per head, so that a family of five will contribute 4s. per year. Now a man cheerfully pays double and treble this duty on his "bacca," and says nothing, and his wife will pay through her tea a duty at the rate of 3s. per head per annum, and she also says nothing.

All the community must take their share in replenishing the National Exchequer, and we cannot think any easier or lighter method could be instituted. To set against this tax which is said to press so heavily on the poor but honest artisan, just let him bear in mind that he now is the only class who gets his children well educated; that is, thoroughly absolutely gratis. Every child costs the Government from 7s. to 10s. annually. Will he be willing to pay that if Sir Michael Hicks-Beach will remit the Corn Tax?

### Work on the Home Farm.

Farmers are notorious for everlasting grumbling, but we must put in a claim to be an exception to that universal rule, for he must indeed be a misanthrope who could quarrel seriously with matters agricultural at the present time. A fine hot week has been favourable to the saving of the crops of Clover, Cow-grass, and Sainfoin, and many meadows are now down in swathe. The root crops were inclined to resent the sudden change to heat and drought, and we had no sooner acquired a longing for a Turnip shower than down came the rain in just the quantity desired. One or two late birds who have Clover still in cock are grumbling, but perhaps they would be less happy had they nothing to grumble about. Certainly the rain has worked marvels, and there must be a fine root crop this season. We own to having made a wrong forecast last year, but one mistake in seven may surely be forgiven.

We are glad to see that Potato spraying is not entirely discarded, for a growing season like this may readily induce a bad attack of disease. It is not yet too late to use the Strawsoniser; in fact, growers who do the thing thoroughly may give their crops two sprayings after this. Of course, much depends on the soil and situation. On low-lying heavy soil, moderately drained, spraying can hardly fail to pay, even if it only keeps the haulm in a growing state for an extra week. On very light soils, and especially in connection with second early kinds, which will meet a forward market, there may be some doubt as to the commercial value of spraying; but, even in such cases, there is a doubt, and it is better to be on the safe side.

With a cessation in haymaking, we can put all hands to Turnip hoeing. The skerry is most useful now, and can hardly be used too much, for every stirring of the soil seems to put fresh vigour into the young plants. It is rather a heavy labour bill we have to meet for weeding. The weather which suits Turnips suits weeds no less, and we must not let them get big and strong, or entire eradication may prove well-nigh impossible. The Mangold, which we had fondly hoped were placed "on the mantelshelf," have required further attention. Weeds which were too small for observation at the last weeding have been lately only too obvious. This is one of the penalties of early sowing. Mangolds which are sown early and grow slowly cost thrice the money for weeding which late-sown Turnips do.

Stock generally are healthy, and good to sell. Pastures are as satisfactory as prices, and we must congratulate our grazier friends on what should be a record season.

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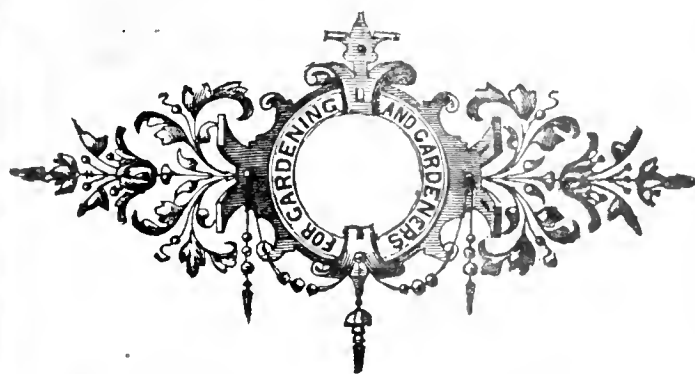
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Journal of Horticulture.

THURSDAY, JULY 24, 1902.

## The Onion.



HE Onion—the bulb of pungent odour and an unmistakeable flavour—is perhaps one of the most important vegetable crops there are. Next to his Potatoes, the humble allotment holder will give his closest attention to, and keep his keenest watch on, the Onion bed, and wherever the working man, who is an amateur horticulturist, has a piece of ground to call his own on which he can grow vegetables, it may safely be asserted that that man's family shall not want for Onions, both for eating in a raw state and eke for flavouring other dishes.

A vegetable of antiquity it is—no modern upstart of a bulb, but one that was valued and appreciated in classic times. Recent discoveries among the pyramids have established the fact that it was well known to the ancient Egyptians four thousand years ago, and in history we may read how, when the Greek and Persian armies faced each other ready to do battle, while the luxurious Persians feasted on the richest viands and drank the choicest wines, the more hardy Greeks made their simple meal of bread and Onions, washed down with pure water, and admirers of the tunicated bulb with a series of concentric coats of fleshy tissue completely surrounding the central axis, or growing point (as the botanists describe it), have gone so far as to say that their favourite vegetable had not a little to do with the subsequent victory of the Greeks. And if it was considered indispensable twenty-two centuries ago, it is no less lightly regarded by many people now, though in these days it generally finds itself in more pretentious company than that of bread and water.

It might seem that Onions and sentiment have little in common. The poet Keats has told us of Isabella weeping over her pot of

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Basil, the pathos of the faded Rose and Forget-me-not has often been dwelt on in story and song, and yet we will venture to assert that the useful, prosaic Onion, the bulb of the many tunics, has been the innocent cause of more tears than any other plant that ever was. What a mighty host there would be could all the busy housewives and industrious serving-maids who have wept silent tears as they shredded those concentric coats of fleshy tissue, slicing up an Ailsa Craig or a Bedfordshire Champion even to the central axis, be collected in one place.

It is only to be expected that a plant so universally grown should not be exceedingly difficult to cultivate, though to get it to perfection a certain amount of care is necessary. It delights in a rich, deeply-worked soil of a somewhat retentive nature, one not by any means as strong as the flavour of the Onions themselves, but not too light and sandy, or the yield will not be so heavy. To trench and throw up the soil in ridges the previous autumn, levelling it down and breaking up with a fork before sowing, is the best method of preparation, and a sowing may be made early in March if the ground is in good condition. It is important that the soil should be sufficiently dry, as the bed should be rolled or trodden firmly all over, and, if sticky, a quite unnecessary amount of soil will be moved, and hobnailed boots are not the most recently devised implements for altering the site of a kitchen garden. Treading is preferable to rolling if time can be spared, as the ground is thus better consolidated, and here, if nowhere else, he who takes a small size in foot-gear is at a disadvantage.

We recollect, in a certain private garden, an old labourer whose pedal extremities were, to say the least of it, not less than normal in area. The youngsters sarcastically nicknamed him "Cinderella," and used derisively to ask him if he would like the walks made wider, and why he didn't set up business as a steam-roller; but the old chap was good natured, and only laughed. But when the spring came round and it was time to tread the Onion bed, "Cinderella" tied up his trousers below the knees, took on an air of importance, and began to be mighty in the land. Well, he knew that no one could touch him at that job, for he was a host in himself, and if Onions required a firm root run, a firm root run they should have, or he would know the reason why. With a well consolidated soil, the bulbs are of a more compact habit, less leafy growth takes place, and the necks are thinner, and to possess a neck long and slender, fit to wear the tallest of aristocratic collars, should be the ambition of every high bred Onion.

Spring sown Onions should be put in in drills about 1ft apart, and  $\frac{1}{2}$ in to  $\frac{3}{4}$ in deep, though market growers often find it more profitable to sow them broadcast with other crops, such as Lettuce or Radishes, which, of course, are off the ground before the Onions are very large. As soon as the plants can be conveniently handled they should be gone over and thinned, and later, the product of a second thinning, which will leave them 6in or 7in apart, can be used for salading. The Dutch hoe or scuffle may be kept busy between the rows, especially in dry weather, for weeds on an Onion bed are vegetation distinctly in the wrong place, and, like the wicked, should have no peace. Only the surface should be disturbed, however, as it is essential that the bed should remain solid.

An occasional dressing of nitrogenous or phosphatic manure, or soot, or a mixture of all three (sulphate, superphosphate, and sootiate, we heard a gardener call it once) is very beneficial in stimulating the growth and increasing the weight of the crop. When the bulbs are ripe, which is indicated by the leaves turning yellow, they should be pulled up and laid out with their bases toward the sun, so that they will thoroughly dry before storing. They may be stored in any cool, dry place, either hung in bunches or covered over with straw, and if properly ripened a little frost will not harm them.

Onions may be sown in autumn, in August or early in September, for pulling for salading in spring, or for transplanting about April and growing on. Autumn-sown Onions, thus transplanted, with the roots preserved as much as possible, grow to a large size, and it is thus that those Goliaths of the bulbous world, of portly presence and imposing aspect, which cannot be sold by the pound, are obtained. The growing season may also

be lengthened by sowing the seed in pans or boxes, and placing in heat in the beginning of the year, gradually hardening off in a frame, and planting outdoors in April. Onions thus treated will be larger than if sown outdoors, and, being forwarder, will be less liable to fall a prey to insects, though the method is too expensive to be carried out on a large scale.

Unfortunately the Onion has another ardent admirer, whose persistent attentions are by no means appreciated by gardeners generally, namely, *Anthomyia Ceparum*, commonly known as the Onion fly. This obnoxious little insect is the bane of many Onion growers, its capacity for mischief when allowed to carry on its depredations in peace is remarkable, and continued vigilance is often necessary to circumvent it.

By keeping a careful watch, and adopting preventive measures in time, it can, however, be generally kept under, and no one need despair of raising a crop of Onions in spite of it. Perhaps no grower ever did actually decide not to attempt the culture of this plant because in doubt as to how much of his crop *Anthomyia Ceparum* might be disposed to leave him, though we once met an agricultural student who was convinced that Turnip growing could never end in anything but failure. He had taken copious notes of a lecture on Turnips, and on reading over what he had written on the enemies, entomological, fungoid, and parasitic, to whose attacks they were liable, he found it ran somewhat in this fashion: "Turnip Fly. Only prevention: sow the crop early and hurry on. Turnip Moth. Only prevention: sow the crop late and keep back." And the poor fellow scratched his head and knit his brows, and speculated as to how on earth he was ever to get a crop of Turnips at all.

The insect in its perfect form is a small fly about  $\frac{1}{4}$ in in length, the male being of a blackish-grey colour, and the female having a yellowish tinge. It deposits its eggs about April or May in the axils of the leaves or on the soil close to the Onion, and when these hatch out the larvæ make their way to the base of the bulb, and gnaw into the interior, where they take up their undesirable residence, obtaining food and accommodation free of charge, but at considerable cost to the Onion-grower, whose consent to the arrangement is never asked. Its presence is indicated by the leaves turning yellow and flagging, for it makes itself so much at home that the bulb begins to go rotten. After about fourteen days, having eaten its fill, the larvæ leave the Onion, and, entering the ground, develop into the pupal stage. If they enter this stage in the autumn they hibernate until the following spring, but if in the summer, they emerge perfect insects in two to three weeks time, to deposit more eggs to hatch into more maggots and devour more Onions.

But though destructive enough, there are remedies against it nearly as numerous as the patent medicines we may read of in advertisements, and some of them possibly much more effective than those medicines, and, what is better, there are various preventive measures which can be adopted. One of these is to dig the top soil in after a crop of Onions, thus burying the pupæ, and to destroy any old bulbs left on the ground after the crop is cleared. Wood ashes placed in the drills before sowing will also be of use in keeping the insects away, and if a few plants show signs of turning yellow they should be immediately pulled up and burnt.

Several means are recommended to destroy or drive off the insect when they make their appearance. Soot is a useful insecticide, dusted over the plants when moist with dew, and the Onion fly has an equally strong aversion to salt, in which he differs from the caterpillars which are said to have attacked an old farmer's Lettuce plants. The worthy man was recommended to try both soot and salt, and he declared that while the caterpillars cared nothing for the soot, when he applied the salt they simply picked the leaves, dipped them in it, and ate them with the more relish. Paraffin is useful mixed with water, or sand may be soaked in it and sown along the rows; lime mixed with soot is effective, either dissolved in water or sprinkled over the leaves at intervals of ten to fourteen days. Soapsuds have also been highly recommended. Thus there is no lack of remedies, and if after being choked with soot, pickled in salt, oiled with paraffin, and scorched with lime, they laugh wood ashes to scorn, and cannot be cleansed out of existence with soapsuds, some heroic individual has advocated the use of sulphuric acid as a last resource. Apply this with sufficient liberality and specimens of Onion fly will be scarce in that neighbourhood, and so, very possibly, will Onions.—A. W. D.

*Lælia crispa superba.*

Herein we have an autumn flowering Orchid of high merit. The lip of this variety is velvety purple shading almost to mauve, and is beautifully crisped and fimbriated. *L. crispa*, the species, is a Brazilian plant, and was introduced in 1826 by a Sir Henry Chamberlain, who sent plants to the Royal Horticultural Society's Gardens at Chiswick. The pseudo-bulbs are 8in to 12in high, bearing a stout, solitary leaf nearly a foot in length. The spikes, rising from a yellowish green sheath, carry four to six flowers. The sepals are white, and the petals, which are broader, have wavy and crisped margins, being coloured purplish at the base.

#### The Week's Cultural Notes.

Pleiones are now growing freely, and the roots must not be allowed to suffer for want of water. They like a sunny corner in the intermediate house, and should be looked after as regards insects. Later on the foliage will be seen to turn colour preparatory to falling, and this is the time to slightly decrease the moisture supply. The different species flower consecutively over a long season, and a collection of them is very interesting.

A useful overflow for the cool house now is a frame or pit in a shady corner of the garden. Just an ordinary garden frame may be used, placing a brick under each corner to allow a current of air to pass, and tacking a narrow piece of perforated zinc around this to prevent mice or other small animals entering. The floor must be well covered with sharp ashes, smiths' ashes for preference, and a little soot and lime may be sprinkled over this. The plants themselves may be stood upon inverted flower pots of varying height, to bring them up to the proper level. This will be a capital place for any of the cool species to finish their growth. The crispum and similar species of *Odontoglossum*, *Oncidium* of the macranthum section, *Epidendrum vitellinum*, *Ada aurantiaca*, and many others may be all placed in it to their own benefit, and this will give more room in the house.

The frame should be damped early in the morning, avoiding wetting the surface of the compost wherein the plants are growing. If this is done, it will be difficult to see which plants require water at the roots. These should be seen to fairly early in the day, and watered not with the spout of the can, but with a rose syringe, this forcing the water into the compost, and ensuring a thorough moistening of the whole of the roots. A very fine spray may be given overhead several times daily, and the pots, floor and sides of the frame kept always moist by syringing.

Look out for all the *Dendrobium* as they finish their growth. It is early yet, but in a very few weeks *D. aureum* and others will be finished. As soon as the last leaf has formed, they must be placed in the full light to ripen, and still kept moist. As the foliage turns colour, reduce the water supply, and place the plants in a vinery or greenhouse to pass their resting stage. No *Dendrobium* will flower freely without proper attention to these details.—H. R. R.

#### Orchids of Commercial Value \*

In the past, when the demand for choice flowers and variety was not so great as it is to-day, most of our Orchids belonged to a limited number of private individuals; consequently, few flowers found their way to the flower stores or came before the general public. The few Orchid flowers then to be seen were looked upon more as curiosities than as an article of trade. The price, also, was beyond reach, and although they were much admired for their beauty, it seemed that Orchids never would become popular, as the supply was limited. The grower would not invest capital or spend much of his time on a plant for which he thought there was no market. Difficulty was also experienced in finding a person competent to grow this, then little known, plant. The grower must therefore personally take charge of and look after his plants, and he would rather do that than entrust his comparatively large investment in the hands of an inexperienced or incompetent assistant. The retail merchant or storekeeper was equally careful in buying flowers he had small chances of selling, or to take an order for goods he was not sure to be able to fill. Under those conditions, the risk was naturally great on all sides.

But times have changed in the last ten years. It is hard to say where we are going to stop. Orchid plants number well up in the millions; flowers are cut and sold in much greater number, at a profit to the grower of tens of thousands of dollars, and still the demand is ever increasing.

Plants can never be cheaper, or the supply, I believe, more abundant than at the present time. Here are a few of the reasons:

Orchids cannot be propagated by cuttings to over-production, as is the case with most other plants. It is a very slow process, indeed, to propagate them by division, and it takes several years for the most of them to attain their flowering period from seeds. We must, therefore, depend almost entirely upon importations from their native growing places. But even there the supply is getting smaller year by year, and it is, perhaps, but a question of time when it will become altogether exhausted. The immediate cause is the thoughtless, unconscious and "don't care" Orchid collectors, the cutting down of the forests, and the needs of the ever-increasing population in these districts.

On the strength of this we may, therefore, say that an over-production of this equally interesting and beautiful genera is next to impossible. The opportunity for the Orchid grower was never better than it is to-day. The demand is always increasing, and the supply nearly always limited. Orchid growing has be-

come a trade of no mean reputation. May it continue to prosper, thus making a change in the monotony of the everywhere appearing Rose or Carnation.

Years ago, when I was a little more connected with the commercial world than I am now, not more than 10,000 *Cattleya Trianae* and as many *Cypripedium insigne* sold in Greater New York every year, and all those were grown in the vicinity of New York City. New York, however, is not the only city with a demand for Orchids, and the New York growers are not the only ones that can grow them. No, the field is open over this whole broad land of ours.

We have a long list of varieties, equally as good as the *Cattleya Trianae* and the *Cypripedium insigne*, only waiting to be introduced, and, when that is done, I am positive they will become popular, appreciated, and dearly loved by the intelligent and flower-loving public. In making up a collection it is, of course, necessary to choose such plants or varieties as promise to bloom through the whole or greater part of their respective blooming season.

To be continued.

\* Read by Robt. Karlstrom before the Hartford (Conn.) Florists' Club, January 28, 1902.

*Lælia crispa superba.*



## Gardening Among the Ancient Romans.

The Romans called the garden "hortus" or "ortus," but they gave this name also to their "villas." As such is the case, it may be interesting to give some idea of what a Roman villa was. The place in question appears to have been a nobleman's country seat, where, together with his luxurious gardens, were quite a number of houses, besides the family residence, for the accommodation of slaves and other servants and dependants. Also the stables, farm and its offices, comprising storehouses, barns, graineries, stockyards, &c.

Attaching to the family residence itself were the gardens, tennis courts, and baths, and in close proximity were places for rearing hens, geese, hares, rabbits, ducks, bees, birds, snails (of which the Romans were very fond), and many other similar places with things and animals, which contributed both to the pleasure and utility of the family's requirements. Several acres were set apart as a park for deer and wild beasts. Besides there was the piseina, or fish pond. This, briefly, is something the nature of what was termed a villa and sometimes "hortus." It will be seen that it was a very different place from what we understand by the designation. In some cases the "villa" had more the appearance of a modern village than any resemblance to the isolated building with its scanty flower pots and gilded railings ornamenting its confined frontage, known to us as the ordinary villa of the present time.

The Romans loved their gardens more superbly—passionately, perhaps—than we do, and though they were probably not such good gardeners as ourselves, they brought equally as much zeal and enthusiasm into their art and operations. Indeed, in many cases they brought very much more. If the situation was deficient in a supply of water they spared no expense to bring the necessary commodity into the garden in pipes or open canals. In some cases the water supply took the form of a considerable stream, which was called "nili."

The various references in the Classics to those centres of grandeur and luxury prove that the pleasure derived from a beautiful garden is no modern thing, and that the Roman was no less a diligent gardener than he was a good soldier. If we eliminate the fabulous gardens and the golden Apples of the Hesperides, Adonis, and Alcinous, together with the pensiles horti, or hanging gardens of Cyrus at Babylon, the Classics still afford us evidence of the Roman's zeal for his "hortus."

There were no less than eight noted gardens within the precincts of the city itself, probably no mean centres of the art as then practised. Those were the Horti Cæsaris, H. Martialis, H. Lucelli, H. Neronis, H. Pompeii, H. Salusti—this was the garden of Sallust the historian, and eventually came into the possession of the Emperors—the H. Senecæ and H. Tarquini Superbi—said to have been the oldest garden in the city. The citizens, too, were much interested in the decorations of their windows with flowers and plants.

In the earlier stages of the art of gardening the "Hortus Pinguis," or what is equal to our kitchen garden, engaged the attention of the Roman people. Here was cultivated herbs, fruit trees, vegetables—such as Beans, Peas, Kidney Beans, Lentils, Lettuce, Turnips—and many other things. It is noteworthy to observe that it was the pods or siliquæ of the Turnips which were used. Many of these vegetables, no doubt, would be utilised as food for the slaves, and probably for some of the many animals kept by those people. In ordinary cottage gardening the housewife was the gardener, and then, as now, her capacities for regulating the order of the interior of the domicile was inferred from the taste she displayed in the order and cleanliness of the garden.

Later in the history of the Romans, and as they advanced in refinement and grew wealthy with spoil imported from subjugated nations, the "Hortus Pinguis," gave way to a more luxurious and ornamental style of gardening. This consisted very much of enclosures with arbours, walks with overhanging trees, evergreens, and statues here and there interspersed. The cultivation of evergreens was carried on to a pitch which was at once grotesque and fantastic. These were trimmed into all manner of forms and shapes, the art of which was called "opus topiarum."

Outside the garden proper was another place of no less beauty, and which corresponds to our pleasure grounds. It was called the "Ambulacra," and was more extensive than the garden, having beautiful shady walks traversing it. Here also was a place set apart for the exercising of the manly sports that the Roman people delighted so much in practising.

The Olitor of the Romans, notwithstanding all this show of grandeur and increasing development in his art, as far as can be seen was a slave. And though his ingenuity must have been considerable in perfecting the operations of the topiary, as well as promoting the no less entrancing mysteries of the graft and scion, there is little evidence that any of his efforts were honourably rewarded with a call to the dignity of the higher offices.—D. C. H.

## Dream Faces in Coronation Pansies.

I have always held there is more than appears at first sight in the many visaged little modesties of our gardens; not that they are all modest by any means, as I hope to show by-and-by. And this Coronation year I am all the more convinced of it as the aspects of my favourites seem more defined and individual than ever before. The whole tribe is, in fact, an absolute study, and if carefully read, you can see not only their present but even their past and future! There are virtuous and vicious ones, modest and assertive ones, happy and unhappy ones, cruel and kind ones, laughing and grave ones; and this year of grace, full of hope and pregnant with possibilities, there is also positively a distinct set of royal ones, headed by an impossible-to-be-mistaken king and queen of exceeding beauty.

For the most part I am bound to confess my floral impersonations represent the fair sex, but by no means invariably. Moreover, now and again some special subject is represented and that in a peculiarly vivid manner. No one, for instance, walking round my borders could fail to note my "silver lining to every cloud" one, a Pansy of striking beauty and of very dignified bearing; neither would one pass in silence my "Sunset," though there are really two of these, one where the scene is lurid and stormy but highly majestic, and the other of a much calmer type. But let us take a promenade, and we shall meet, I trow, with much of interest, and make some pleasant acquaintances, I trust. Rather appropriately, almost the first we come to represents "Dawn," a pale centre with a darker outline, which promises to merge entirely into the former, and with a suspicion of the sun appearing on the horizon in the guise of a narrow streak of yellow on its extreme tip. Skipping two or three groups of more or less insignificance, especially a rather obnoxious one with "Street Arab" plainly delineated in their features, we come to an unmistakable "Sunrise," and a rather gorgeous one at that; the whole surface of the flower being bathed in a warm red glow. And now we are well floated on our enterprise, and getting, so to speak, out into the swim.

Though rather bewildering, we must pull ourselves together and discriminate, or we shall get into difficulties, for some of our friends are extremely capricious, while others are susceptible to a degree, and most particular as to whom they represent. Who is this exceedingly shy and diffident looking little thing in almost pure white—petite also, and surely nothing like full grown? Neither is she. It is, in fact, a sweet little maiden not very long promoted to the schoolroom. Rather a contrast to her neighbour, who is clearly a dowager, and a haughty one, too. Somewhat overdressed, many would say, and her rich velvet is rather of a flashy hue, albeit of an evidently costly fabric. Close by, also, is another smart lady, all very fine and large, to use a vulgarism; anyhow, of ample proportions, and in this case in low dress. Her gown, a purple one, is a good foil to the whiteness of her neck and arms. But whoever is this? A politician, I shrewdly guess; he has a slight stoop, with a distinguished, clever face; and hard by, apparently talking to the former, is a diplomatist of erect carriage and keen eagle eyes which appear to look right through you. "Oxford and Cambridge" comes next, the two blues blending in admirably together, as only Nature's own colours can, and rather appropriately, not a yard off, our dear old "Eton," or as near the hue as a Pansy is ever likely to obtain. And here we come to a whole bevy of fair ones. They are fluttering about and seem rather excited; possibly some "mere man" has been telling them that in the Caucasus they bury their sisters deeper than the other sex because of their inherent restlessness, and I rather think this may have flustered the pretty dears.

They are pretty, too, and there's no denying it. The nearest is a delicate-looking blonde, next to her on the off side is a peculiarly sweet-looking girl, surely still in her teens, and slightly blushing, apparently; a great contrast to the one immediately behind her, a pale beauty of a very distinct type, and who, in her turn, is quite different to another on her right, who possesses a somewhat distressingly rubicund complexion, and suffers a trifle from embonpoint. A taller one in the same group has a more pleasing appearance from having the "red" more favourably placed. "The cherric of her lips" is, indeed extremely becoming, and I think so deems that rather distinguished-looking gentleman of unquestionably blue blood, not ten paces distant. What a pity life is such a mixture, but it is ever so! Here is rather a horrid person to be about. I much fear she has been drinking. Just look at her face, it is all blotchy. Let us hurry on and inspect these jolly little school-girls. They look as happy as the day is long. Altogether a ripping little crew! Naughty creatures, they are laughing at a boy of about their own age, who happens to be endowed by nature with a moon face.

And, talking of the latter, on exactly the opposite border there is a real "Moon," mysterious, cold, and rather awe-inspiring, but beautiful withal. A step or two beyond that clump of Sweet Peas just opening their sweetness (I was going

to say, to the desert air, but I fear our friends now under discussion would not feel flattered), we come across a young girl with a visage labelled "fast." Her eyes show it unmistakeably. Aha! just as I expected. Hats off, gentlemen, for the King! No failing to recognise that blue, even if one did not distinguish the ermine for a moment. Her Majesty, too, in a vesture of gold! Who's this in their train? The First Lord, judging by his pincenez, and—ah, yes, that tall, rather stern gentleman with a military bearing is sans doute the late Sirdar, back from his recent scenes of action, apparently. Hello! Gracious me, I mistook you for a cat, madam. 'Pon honour, I crave pardon, but you resemble my tabby to a T; you do, indeed! Well, sir, what are you laughing at? Faith, your mouth looks like splitting. Oh, I understand. Yes, that's funny, certainly—"dignity" and "impudence" over again, evidently—you very tall lady with the white frilling of point lace, and the puce-coloured bodice, rather superciliously looking down upon that roguish little urchin scarce reaching to her waist, with large gipsy eyes and fresh coloured cheeks. And there's "Granny" at last, hard by that flowering Berberis; dear old lady, just ready for the opera, in a damask heliotrope with shades of grey to match. Deary me! What a shame, actually a baby! Whose olive branch are you, little one? There, don't cry so, your eyes look quite red and sore. Your neighbour doesn't look much better, either. How splashed you are, sir! Been out in the rain, perhaps, or made a night of it and not come home till morning? No wonder you look a bit pale, too. One couldn't teach you much, I reckon; what you don't know isn't worth mentioning, judging by your face!

Now, really, my good sir, you're not in black, though you're trying to pretend you are. Apeing the parson perchance, and, "birds of a feather, &c.," quite in keeping, certainly. So your friend's masquerading, too; but this seems a more serious matter—a young man in the garb of a woman. You're detected, however. Why, I can see your dark trousers beneath that spangled skirt. Now, how very odd! Just round this corner, and nodding to each other across the pathway, are "Peace" and "War." How furious the latter looks, full of passion; envy, jealousy, and hatred are clearly depicted; but the former's visage is one of calm serenity, not a cloud or speck to mar its look of absolute repose. "Sunshine" and "Rain" at rather opposite points of vantage are interesting in their way, though I like the former best, the wealth of gold of the first-named seeming to light up some kinsmen immediately surrounding. It was just at this juncture that, I regret to say, we came across an old offender—no less a personage, in fact, than the redoubtable Mephistopheles. He was looking about as luridly red and diabolical as he is generally represented, parts of him appearing to merge into the blackness of Tophet. Positively we were not sorry to turn away our gaze.

And now we must hurry on, for we are about to pass one of those dangerous syrens, a daughter of Eve, certainly, but like Cleopatra, one whose life work is clearly to fascinate and ensnare. Just a glimpse and no more. Mark her eyelashes. Ah! cruel beauty, I am no Mark Anthony, I assure you. Prithee, let me pass. What a relief! And now we are safe again; but glance over your shoulder, we had almost overlooked in our haste quite an object of compassion. "Pity me, kind sirs," I feel sure I heard her say. Poor wee pale morsel of humanity—I mean, of course, "florality." But how did you come to look like that? Ah! the usual sad tale, is it? Jilted? But perhaps it was your fault. No? Ah, well, cheer up. Don't droop so in this beautiful sunshine. Life may yet have much happiness in store for you.

A sharp turn to the left brought us to quite a different state



*Corydalis thalictrifolia.*

fellow over there, pulling that fearfully long face and exclaiming "I am slain by a fair, cruel maid," is one of your victims. But time presses, and—

Dear, how exquisite! So you are engaged, are you? Well, I don't wonder. You've the complexion of a Peach, but who to? That man. H'm, I don't admire your taste, I'm afraid. Great bloated creature with staring eyes and vicious-looking nose. One more turn round that clump of Rhododendrons, and I see our tour is over.

Why, you're looking bilious, sir. What's up? Seasick, is it? That all. I should think a look at that face yonder the best antidote for you, if there's anything in the saying, "like cures like" (though the young lady must understand I only allude to the colour). Anyhow, there's no fault in her looks. "A sweet girl graduate with her golden hair," methinks. Ah! we can't all be young, can we, though you, madam, seem to think we may. If it didn't seem rude, now, I should call you an elderly young lady. But I won't disturb you, anyway, or that flashy-looking youth with beaming countenance and white Gladstone stick-ups. I rather prefer, I think, that matronly-looking dame in the handsome but quiet brocade of figured blue, who seems to be chaperoning the demure little pink and white demoiselle. There is peace in the look, too, of a very ladylike woman vis-a-vis, talking to the stout dowager, whom (the former, I mean) I pronounce to be an old maid. Rather pale, dignified, and with a benign countenance, very kindly, moreover, surely distinctly good-looking in her youth.

Ah, me! How time has flown! Here we are at the end of the broad walk and our round. Addio, friends all, old and young, or let us say, rather, a riverderci.—J. A. CARNEGIE-CHEALES.

#### *Plumbago coccinea.*

It has often surprised me that this useful and showy plant should be so seldom met with where winter flowers are in demand. It is, I believe, a native of East India, consequently requires warm treatment, and when well done is a magnificent object of floral beauty, producing panicles of large red blooms upwards of 2ft long. It is very light and graceful when cut and arranged with suitable foliage, and lasts fairly well for room decoration. I find this plant is not so easily injured by fog and smoke as many other things are. It grows admirably in a compost of peat, loam, and leaf soil, with a sprinkling of sand. —J. EASTER, Nostell Priory Gardens.

of things, and justified our exclamation: "Why, what's the matter now? You are angry, and no mistake! You quite frightened us. Insulted, were you—what, by that wretched-looking old haridan over there in those painfully crude colours? There, calm yourself. Your brilliant purple is not much better, and seems a bit out of place in your immediate surroundings, for that modest coterie hard by, with white frocks and blue scarves plainly betokens a wedding. And in effect, so it is. An almost perfect bride! What a sheen of white, how lovely a self! Well-a-day, here's a contrast. Good gracious! how absurd! My good woman, have you any idea what colours you are combining on your person? No? Why, then, let me tell you you've all the colours of the rainbow at least, and I think more too, only I can't stop to count them. Ah! that's better. How coy! We hardly saw you, screening yourself beneath that Fox-glove. Oh, yes, of course, we know the proverb, "Coy as a woman, and fickle as she;" nevertheless, my dear, you are pretty, and no mistake about it. Just let me chuck you under the chin.

And I suppose that poor





### In a Garden of Roses.

Imagine if you can, a garden set amongst the high Derbyshire hills, placed with its back to the north wind, and overlooked by towering limestone rocks, from the top of which the most secret places in this garden may be peered into. An idea can be obtained from this that the picturesque element is by no means lacking in the situation and its surroundings. In winter there is apt to be too much scenic effect, with far too little in the way of shelter to mitigate the cruel effects of the long and trying winters, which in such a neighbourhood our favourites must, with more or less success in withstanding, undergo.

This season has been an exceedingly trying one in the district I am speaking of. Roses of all descriptions were very slow to commence growth, and a cold wet June served to still further retard activity in leaf and bud. Pests, of more than one kind, have been unusually prevalent—mildew, maggots, and the always-to-be-expected green fly. Yet, on the day of my visit, I found a feast of Roses sufficient to have satisfied, if not satiated, the most ardent of Rose worshippers. Here were "Gloires" on the Briar, and on their own roots, trained to walls, and in pillar fashion to poles, all flowering in such profusion as only this old favourite can. Maréchal Niel, growing on a south wall, was carrying some lovely blossoms, large and highly coloured. One is naturally somewhat surprised to find this Rose thriving so well in the open in this part of England. Notice is taken of great masses of Souvenir de la Malmaison side by side with Cramoisie Supérieure, the rich crimson of the latter contrasting well with the pale Malmaison. Upon the same wall a splendid note of colour is struck by Paul's Carmine. A splendid plant this, lightly pruned, and with as many as possible of the young growths of the preceding year allowed to remain, a most beautiful picture was the result. Somewhat fugitive are these singles, but unless one is simply a rabid exhibitionist, there is not much to be said against them, they are so charming while they are with us. Paul's Single White, though not so showy as the above, is pretty and free flowering, and useful withal for vases; the buds on a spray opening readily in water, and lasting some days after cutting.

Planted upon the north of a four-foot wall were found the Penzance Sweet Briars. Here Rose Bradwardine, Brenda, and many more of Scott's heroines were freely producing their lovely flowers. Long shoots 8ft or 9ft long, fastened down their full length, had "broken" at every joint, and each shoot was topped by a small bouquet of the richly scented blooms. The treatment consists of cutting away a great part of the old wood each season, and laying down the strong shoots already spoken of, and which year after year are ready for the process, with unfailing regularity.

A good many people will tell you they know Maiden's Blush—or the Rose of that name—quite well; but not so many would be able to describe Celeste. This is a charmingly fragrant Rose, the colour a few shades more fiery than Maiden's Blush, but the shape of the two Roses is identical. The foliage of Celeste may be more inclined to be glaucous than the other, but except in colour there is great similarity between the two. Buds of Celeste are splendid for decorative effect, especially for table work.

Long narrow beds, containing many hundreds of Chinas, claimed attention. That known as the common Monthly was well represented, as also the one known as Hermosa. Many thousands of flowers are annually gathered from these, and they are much appreciated. Where cut Roses are in large request, these Chinas deserve more than mere cursory notice. They are wonderfully easy to grow, and flower with wonderful freedom until the frosts of autumn end their beauty and sweetness.

I saw ramblers of all sorts in great profusion of growth. Pink Euphrosyne, a lovely climber this; the Dawson, another pink, with individual flowers larger than those of Euphrosyne, but the colour is not quite so glowing; Thalia, the white rambler, and Aglaia, the yellow. This last named has been thought rather shy to flower, and in the early stages there may be some truth in the accusation, but as seen here growing against a tall oak fence, it was beautifully floriferous. For the Crimson Ramblers I was too early. Grown on the walls, against poles, or to espalier wires, the promise was the same in all cases. A multitude of fiery hued blossoms to open and light up many a nook of that old garden.

Amidst all these climbers and old fashioned Roses, it must not be supposed that the H.P. or Tea sections are neglected. Long narrow beds are provided, in which many old favourites, as well as the newer kinds may be found—Fisher Holmes, Etienne Levet, Helen Keller, Mrs. John Laing, amongst many others, I noticed in fine form; Marie Van Houtte, Hon. Edith Gifford, Maman Cochet, and Souvenir de S. A. Prince were good amongst the Teas; H.T. Caroline Testout was carrying some grand blooms, and Viscountess Folkestone, in a round bed, was making a brave show.

Protection, in the shape of bracken, has to be provided in winter, otherwise casualties would be frequent, as the climatic conditions in these hills are none too favourable. With this aid several of the varieties are, as a rule, cut to the ground line in winter, but generally break into strong growth in spring.—WANDERER.

### The Rose Name Gruss an Teplitz.

There has been a somewhat interesting discussion in certain foreign horticultural papers concerning the name of this Rose. To the purely English people the name has a harsh and crude tone, which is entirely foreign to the generality of Rose names. We have been so accustomed to associating the Rose with the musical French and English names, or with names in which there is some delicate sentiment, that the saddling of the flower with a mixture of rash and harsh tones, such as is made by the jumbling of g, r, s, t, and z, has caused some comment. It was stated by one connoisseur that the Rose was incorrectly named, and that it should properly be Gruss aus Teplitz, signifying a greeting from the city of Teplitz, and, in fact, it does so appear in one European trade catalogue. The truth of the thing, however, is (says "American Gardening") that the name as generally given is the correct one. The raiser of the Rose in question, formerly associated with the city of Teplitz, has now removed therefrom, named his novelty as a compliment to the city of his affections, and the flower thus becomes a greeting to the city.—"Gruss an Teplitz."

### Roses at Broughty Ferry.

The monthly meeting of the Broughty Ferry (Forfar) Horticultural Association was held on July 15, Mr. William Grant, president, in the chair. At the exhibition of Roses Messrs. Croll, Dalhousie Nurseries, were the chief exhibitors, their specimens of various kinds being really high-class. Messrs. Storrie, Dundee, also had many fine blooms forward, the collection being further enhanced by the exhibits of several gardeners. Mr. James Simpson, Dalhousie Nurseries, gave an address on "Roses," in which he imparted much information; both historical and cultural, on the favourite flowers. In the course of his remarks, he maintained that Scotland more than held its own in Rose culture, and in no district were they grown better than in our own. He had seen Roses exhibited in Germany, and in the Royal Gardens there, but they were inferior to those to be seen in Britain. Discussion followed, and Mr. Simpson and the exhibitors were accorded hearty votes of thanks, on the motion of Messrs. Barker and Slater respectively.

### Roses for English Gardens.\*

Considering how great is the utility of the Rose from many points of view, it is not surprising that the number of books dealing with Roses is steadily augmented, but rather that additions to Rose literature in book form do not appear oftener than they do. It is so convenient, even if there is nothing fresh about it, to have a compilation at hand such as this book furnishes for ready reference.

On pages 28 and 29 Miss Jekyll says of this book that it "is for the amateur, and deals with the subject from the point of view of garden observation and garden enjoyment."

It is a book which tells what are the best of the Roses in their many sections for the primary purpose of making the garden what it is intended to be, namely, a lovely place full of the most beautiful flowers which are disposed and harmonised to the very best advantage.

After briefly discussing the better varieties in the chapters devoted to them, the lady author appends lists which afford a further selection. Thus we have the New Roses discussed, and these form a chapter, and selections follow; then there are the species of Roses for garden uses, and the same rule is adhered to—the discussion first, then the lists.

Naturally enough the pergola, with arches, pillars, and screens, are considered from all points of view, or rather we should say that Roses for them are. It is only necessary to state that over 190 illustrations are included in this publication, to convey an idea of how liberal a share in the work of guidance and demonstration is effected by their assistance.

Everyone of the illustrations are from half-tone blocks of photographs and wash-drawings, and each occupy a page. The illustrations of pillar Roses are excellent, but many of the others are too dark to be of much use as a guide to the floriferousness or other character of the Roses portrayed.

Mr. Edward Mawley is author of Part II. of the book, and some of his chapters are on planting, pruning, propagating, exhibiting, and other practical work in Rose culture. He also discusses the enemies of the Rose, and the under-glass treatment of the plant. Lastly, he contributes "Some lists of the best Roses for various uses," which are very select indeed, and include the newest of the new, but all are of prime merit. With Mr. Mawley's chapters added, the book may admirably serve as a Rose manual to all who can indulge their tastes in this lovely flower. (Pp. 166, with index. 9 x 5½.)

\* "Roses for English Gardens," by Gertrude Jekyll and E. Mawley. "The Country Life" Library. Geo. Newnes, Ltd. 12s 6d. net.

# NOTES & NOTICES

## Scottish Award.

At a meeting of the council of the Royal Caledonian Horticultural Society held on July 16, the Neill prize was awarded to Mr. David Murray, gardener to the Marquis of Ailsa, Culzean Castle, Ayrshire, who has been a most successful grower both of fruits and vegetables.

## Cactus Dahlia Mrs. F. A. Perkins.

This lovely variety was greatly admired at the exhibitions last autumn. It is really one of the few gains of its season, and I find it is to be introduced this spring. The colouring is so charming! It is yellow, fading to the points of the florets to white, so that it has the appearance of being tipped. The shape of the flower, too, is elegance itself; of true Cactus form, and, if not gigantic, is large enough. A distinct and pretty thing like this will find favour among all lovers of these easily-grown and satisfactory flowers. It is safe to recommend that it be added to the smallest collections.—H.

## Horticultural Teaching.

The technical education system of the county councils is everywhere planting centres of training in every branch of agriculture and horticulture, and making them available at merely nominal cost. Residential schools have been established, with farm lands, dairies and gardens attached. The movement for the teaching of gardening to children in elementary schools has made great progress. During 1900 110 schools claimed the grant on 1,545 boys, of whom 1,098 received the full grant of 4s. as having put in their full forty-eight hours gardening, and 447 took the 2s. grant as having put in over twenty hours, but under the requisite forty. In 1895 only one school claimed the grant. In addition to the schools securing this grant from the Board of Education a large number of schools are taking up the matter for its interest-awakening value.

## Scottish Arboriculturists Visiting Sweden.

The Royal Scottish Arboricultural Society held a meeting at 5, St. Andrew Square, Edinburgh, on July 18, over which the Earl of Mansfield presided. The report by the judges on essays received in competition was to the effect that the medals had been gained by the following:—"The Forests of the Basses Pyrenees," George Cadell, late Indian Forestry Department, 1, Whitehall Gardens, S.W.; "The Erection and Maintenance of a Sawmill," W. M. Mitchell, forester, Gort, County Galway; "Report on the Plantations of an Estate," James Rodger, forester, Morton Hall Estate, Ringland, Norwich; "Creosoting Timber for Estate Purposes," George Leven, Auchincruive, Ayr; and "The Propagation of Forest Trees and Shrubs," Gilbert Brown, assistant forester, Scone, Stormonthfield, Perth. Reporting on the forestry exhibits at the Highland and Agricultural Society's Show, Mr. D. P. Laird said they must congratulate themselves on its success. Compared with that at Inverness, it was 50 per cent. better. They hoped that in years to come that section would go on improving. The meeting lasted a little over a quarter-of an hour. At 11.5 the party left the Waverley Station for Granton, there to embark for Sweden on the s.s. Balder. Among those who are taking part in the trip to Sweden are the following:—The Earl of Mansfield, president; Mr. R. C. Munro-Ferguson, M.P., hon. secretary; Sir Aach. Buchan-Hepburn of Smeaton Hepburn; Sir Leonard Leyall of Kinnaldy; Colonel Porteous, Kinross; the Rev. D. C. Stewart, Currie; and Mr. R. Galloway, the secretary. The excursionists arrived in Gothenburg on Sunday the 20th. Up till Thursday, August 31, they tour round places of interest. —On Thursday, July 24, they visit the Royal Palace at Stockholm, and on the following day a visit will be made to King Oscar's summer place at Drottningholm. On Tuesday, July 29, the party travel to Falun, the capital of Dalecarlia, which is perhaps the richest Pine region in Europe. The return journey will be made from Gothenburg on Friday, August 1, by the s.s. Bele.

## Appointment.

Mr. Daniel Betts as head gardener to the Lord Bishop of Exeter, in succession to Mr. T. Munday.

## The Queen's Cottage at Kew.

Mr. John Ellis (Notts, Rushcliffe), last week in the House of Commons, asked the First Commissioner of Works whether the public now had access to the Queen's cottage grounds in Kew Gardens; whether the gates had been unlocked; and whether the grounds had been thrown open again to the public, in accordance with the permission given by Her late Majesty. Mr. Akers-Douglas (Kent, St. Augustine's).—The answer is in the affirmative.

## Women in Horticulture.

The fourth founder's day of the hostel for women students in horticulture and the lighter branches of agriculture, founded by the Countess of Warwick in 1898, was celebrated the other day at Reading in charming weather, and in the presence of a large and distinguished company, including the Countess of Warwick, who has quite recovered from her recent indisposition, and her daughter, Lady Marjorie Greville. The Countess of Warwick in opening an interesting exhibition of flowers, fruit, dairy produce, and poultry, said that the work was going forward steadily and was prospering, and new posts and new professions were being opened up for the vast army of educated women who were making for themselves a distinct place in the world by thoroughness in training and the keenness with which they had undertaken what was but a few years ago pioneer work. Cordial thanks were due to the principal of Reading College, Mr. Mackinder, and all his staff for their great assistance in the past. That association for theoretical training was now severed, and she felt the grave responsibility of managing entirely by herself such an important work as the hostel had grown to be. But as no one seemed inclined to help her she intended to persevere year by year. The annual report submitted by the warden, Miss Bradley, showed gratifying progress in all departments. Mrs. Clare Fitzgibbon, of Toronto, secretary for the Dominion of Canada Women's Agricultural and Horticultural International Union, made an earnest appeal to English women to thoroughly learn such subjects as were taught at Reading, and then to make their way to Canada where a splendid future awaited all of them who had really qualified.

## Croydon Horticultural Mutual Improvement Society.

A meeting was held in the society's room at the Sunflower Temperance Hotel, on Tuesday evening, July 15. Mr. W. J. Simpson presided, and Mr. M. E. Mills occupied the vice-chair. The subject for the evening was "Remarks upon the Microscopic Structure of Plants," by the hon. secretary, Mr. J. Gregory. The lecturer described the principal minute structure of Desmids, Algæ, Lichens, Mosses, Ferns, stems, leaves, and their appendages, fungi, pollen, &c. The remarks were illustrated by a number of microscopic slides prepared by Mr. Gregory, and shown under microscopes on the table. The lecture was of considerable interest and practical use to the members. A brief discussion followed, and on the proposition of Mr. E. Kromer, seconded by Mr. Terry, a hearty vote of thanks was accorded the lecturer. The following programme of meetings to be held in the society's room at the Sunflower Temperance Hotel, George Street, Croydon, has been prepared: Aug. 19.—"Cultivation of Strawberries, Inside and Out," by Mr. J. Lyne, The Gardens, Foxbury, Chislehurst. September 2.—"Discussion on Birds of the Garden," by Mr. P. F. Bunyard, hon. treasurer. September 16.—"Violas," by Mr. G. Dray, superintendent, the Recreation Grounds, Sydenham. October 7.—"The Renovation of Old Fruit Trees," by Mr. T. Neve, The Gardens, Lindesham House, Wokingham. October 21.—"How to make an Alpine Garden." Illustrated; by Mr. E. Lovett, West Burton House, Addiscombe. November 4.—Discussion night. November 18.—"How Plants Grow," by Mr. H. O. Etherington, manager, J. R. Box's Nurseries, West Wickham. December 2.—"Stove and Greenhouse Ferns," by Mr. Dyson, Fern grower to J. Hill and Son, Lower Edmonton. December 16.—"Insectivorous Plants," by Dr. Brook Ridley, Widmore, Sydenham Road.



**Corydalis thalictrifolia.**

This is a new Chinese species, which would seem to be almost, if not quite hardy. A plant of it is growing well in the Rock Garden at Kew, but Messrs. J. Veitch and Sons, Ltd., who staged it in quantity at a recent meeting of the Royal Horticultural Society in the Drill Hall, and received an award of merit, grow it in pots. Perhaps, however, they did so only for that occasion. The large flowers are deep yellow and about the size shown in our illustration on another page. The sketch there presented also shows the foliage. Being free-flowering and showy, it is likely to become popular.

**Herbaceous Calceolarias.**

There will always be lovers of these flowers in evidence, and as cultivators they are second to none in the devotion they bestow on their special favourites. The collection which we figure on page 87, was grown by Mr. Edwin Broadey, The Gardens, Hooten Grange, near Chester, the seeds being procured from Mr. Henry Middlehurst, seedsman, Liverpool. The group represents a very fine strain, and some of the flowers, he tells us, measured 2½ in across, while a few of the plants were 2½ ft to 3 ft through. Mr. Broadey adds that they were greatly admired by numerous visitors. Perhaps our correspondent might be induced to describe his successful method of culture through the columns of the Journal.

**Effect of Cold on Plant Oils.**

Oils of Chamomile, Rosemary, Cumin, *Illicium anisatum* and Rose are found by Dubois to phosphoresce in the cold on agitation with an alcoholic solution of potassium hydrate. The different behaviour of oils of Geranium and Pelargonium gives an easy means of recognising substitutions of these oils for oil of Rose. Turpentine oil does not phosphoresce when fresh, but sometimes does so when old. The most brilliant effect is shown by *æsculin*, a glucoside of Horse Chestnut bark. In the cold alcoholic solution of potassium hydrate this substance sparkles for hours, brightening up with every movement of the liquid, and giving an intensity of light in direct proportion to the purity of the *æsculin*. In no case, however, is this phosphorescence equal to that of cultures of marine photo-bacteria.

**Plants at Barmouth.**

A few years ago, Major Best, Lingfield, brought from Mentone a plant of *Mesembryanthemum truncatum*. It is a plant that does not usually stand the English winter, but when the plant found that it had been transplanted in a country like Wales which can boast of *Llanfairpwllgwyngyllgogerychwyrndrobwlllandysiliogogogoch*, it having a crack jaw name itself, at once felt quite at home, grew luxuriantly, flowers freely, and has stood several winters at Barmouth quite unprotected. Mr. T. Lewis of Messrs. Clibran's says that for covering bare patches of rock or exposed dry positions such as abound at Barmouth nothing can be more suitable than the *Mesembryanthemum truncatum*. Another plant which grows and flowers profusely at Barmouth is the *Centranthus ruber* or the red Valerian. The bank facing Porkington Terrace has been simply gorgeous in its red Valerian dress this season. The spread of the plant is not due to human effort, but to the distribution of the seeds by wind, birds, and insects.

**Misuse of Coal.**

"So far back as 1882, the discovery was made by Sir D. Brandis and myself that the Eucalyptus planted on tropical mountains will produce fuel at the rate of twenty tons (dry-weight at 60 lb per cubic foot) per acre per year in perpetuity. The Eucalyptus plantation reproduces itself when cut without further expense, and its dry timber (which as met with commercially weighs 50 lb to 52 lb the cubic foot) has an equal, or a higher thermal power, bulk for bulk, than coal. We obtained this result as the maximum yield of *Eucalyptus globulus* on the Nilgiris, Southern India. . . . If a chance tree on a chance mountain in a chance soil can produce the equivalent of twenty tons of coal per acre per year, it seems not unreasonable to suppose that by selection we can produce, say, double this, or forty tons. To produce this in perpetuity, we should probably have to find a tree with the moderate soil of the Conifers, a powerful sun, a heavy rainfall, and a very rapid forced growth would be the essentials of such a production of wood fuel."—(From "Nature," July 10, 1902.)

**Heliconia vinosa.**

On another page we illustrate a broad-leaved and handsome species of *Heliconia*, one perhaps but little known. The leaves are large, and broadly oblong, quite 1 ft, or even 1½ ft long, bright green on the upper surface, and purplish beneath; the top surface, too, is ridged. As a stove plant we see no reason why it should not be more freely grown, being quite as ornamental as most of the other species, and comparing well with any of the Marantas.

**The Use of Architectural Features in Gardens.**

Now that "wild gardening" and that more negligent, though withal beautiful, style of gardening which sees its perfection in wide swathes of bright flowers "naturalised" in their surroundings has so largely become the vogue and is leading others to adopt it, there seems a danger of losing the placid dignity which characterised old English gardens. Not that we ever desire a return of the type of garden which prevailed in the days of Loudon and Wise, but we have no desire, on the other hand, to abolish everything that is "stiff and formal" from the garden design. Who, with good judgment and a knowledge of the beautiful in art and nature, will say that the formal walk and placid pool confined within the straight-lined balustrade, as shown on page 83, does not command admiration, and gives the impression of dignity and strength to the surroundings? Properly executed, architecture should help certain scenes in the garden, and it is not at all incompatible, as some suppose, to introduce ornamental masonry with improving effect to the garden plan. The landscape gardener is not, or ought not to be, merely a person who groups shrubs and trees advantageously or introduces the water element effectively in scenery; he is largely an architect as well, and it is quite within his province to prepare designs for such a feature as that on page 83. The confusion arises in these days from the fact that a large number of nobodies take upon themselves the name and pretensions of a fully-equipped landscape gardener without having the power to advise on any line but the solitary one which they employ in all cases.

**The Gardens at Hatfield.**

A grand garden party was given at Hatfield House on Saturday, the 19th inst. Hatfield's ancient Oaks have looked down on many a notable gathering of leading men and women since the first Earl of Salisbury built the stately home which is now the glory of the Cecils, but seldom have their rugged branches overshadowed a more brilliant assemblage than that which gathered on the terraces. The reception over, the many visitors moved about the grounds, talked with their friends, listened to the music of the bands of the Grenadier Guards and the Royal Engineers, who performed, one in the eastern and the other in the western gardens, or admired the beauty of the flowers. Evelyn spoke of Hatfield "garden and vineyard" as being "rarely well watered and planted," while Pepys says of the gardens that they were "such as I never saw in all my life; nor so good flowers, nor so great Gooseberries, as big as Nutmegs." The Hatfield vineyard is a vineyard no longer, and there were no great Gooseberries visible on Saturday, but the gardens are still "rarely well" planted and the flowers still "good. There is a rosery on the eastern side of those famous stables which once formed part of the Palace in which both Edward VI. and Elizabeth resided under guardianship, and here, though the first glory of the Roses is over for this year, many fine specimens of the queen of flowers were to be seen. Close by, in the square garden whose most noticeable feature in its Lime tree walks, there is such a collection of flowers in various tints of blue—Monkshoods, Delphiniums, and Lupins—as must have gladdened the heart of any "herbaceous perennial" enthusiast who may have wandered thither. On the other side of the house, just beyond the old maze, is a walk overarched with Banksian Crimson Rambler, and other climbing Roses, and near it lies an old-fashioned enclosed garden whose principal features are its great clumps of Lavender and its China and other Roses. The well-known Hybrid Tea Rose Marquis de Salisbury, whose petals when at their best seem to be composed of the richest scarlet velvet, and the less familiar Lady Cranborne, a pretty pink and white cluster Rose, are here growing appropriately almost side by side.

## Devon Gardeners' Outing.

Each year the Devon and Exeter Gardeners' Association enjoy an annual trip, and their latest was held last week, under the arrangements of the indefatigable hon. secretary (Mr. Andrew Hope), the genial hon. treasurer (Mr. Wallace Mackay), and the committee. The party, which included some friends, numbered about sixty, and assembling at St. David's Station, Exeter, journeyed to Totnes. Arrived later at Greenway, a landing was made at the private pier for the purpose of inspecting, by invitation, the extensive and well-arranged grounds of Mr. T. Bedford Bolitho's magnificent seat. The experts of the party were, of course, deeply interested and much admired the many rare delights on this beautiful estate, some of which are probably quite unique as specimens of arboriculture. The Blue Gum trees were notable, some of them have been imported from Mr. Bolitho's Cornish seat at Penzance, and the salubrious



*Heliconia vinosa.* (See page 78).

climate of the river Dart seems to be as congenial to their habit as to that of their original home. Here were Blue Gum trees from 20 to 30 feet high, an unusually fine specimen of the Tulip Tree, bearing its golden yellow blossoms, the New Zealand Flax just bursting into bloom, while the Pittosporum seemed to be entirely at home. Few of the gardeners present had ever seen these so well developed, the foliage being of beautifully crisped olive green. There is a luxuriance of blossom on the parterres, and Roses ramble at will on the jutting rocks and tree trunks, forming a picture to marvel at, while the conservatories contain a wealth of flowering Pelargoniums, Begonias, and other hothouse plants. In the flower gardens and kitchen gardens there was evidence of the expert's skill and care. There were abundant crops of Figs and other fruits, rows of Sweet Peas 10 feet high, and many herbaceous plants in full bloom. Taking a winding path through the woods belonging to the estate, some beautiful views of the entrance to Dartmouth harbour were had. Rejoining the boat the party steamed down to Kingswear, where they were met by Mr. Allen, head gardener to Mr. R. F. Wilkins, of Brookhill, who conducted them to this charming retreat. There was a couple of hours' stroll, and then the return to home.

## Commercial Floriculture in Italy.

Mr. Peter Crovetto, who has spent several years in American commercial floriculture, and is now located in Chiavari, Italy, writes to a friend in Tewkesbury, Mass., so entertainingly of what he has observed in that distant country that we ("The American Florist") have obtained permission to publish the following abstract of his letter:—

"The principal flowers here are Roses, which are grown as are Currants and similar stock in America. In summer they get rested naturally by the dry spell, often of five, six, or seven months' duration. From the latter part of August until October 20 they are carefully pruned, cultivated and mulched. The first rain generally comes in September, and after that they start to grow as though spring was approaching. The first flowers come in November, but the full crop is generally between December 1 and January 15, when the Bordighera, Nice and Cannes Roses come in full blaze and last until the 1st of March, after which the flowers are generally poor, but by that time so many bulbs are flowering that the Roses are not missed.

"Next in importance to the Rose and Camellia are the Carnations. These are planted out in like manner, but they being very particular about soil, and it being next to impossible to obtain sod here, we must work the soil to a depth of more than 3ft to turn up the deep subsoil, otherwise the plants get the stem-rot, fully 90 per cent. of them. The result of this hard work is that we get good Carnation plants, and the culture is much the same as in America when grown in the field. All colours are grown, the scarcest being good pink sorts. Every flower bursts the calyx, but the blooms are so nice and large and so double that the bursting is hardly noticeable.

"I have several American varieties, and the most of them burst also, but on account of their long calyxes these flowers are useless, while ours are short in calyx, and when open hold the petals well together without appearing ragged. Flora Hill splits 80 per cent., Crocker 50, White Cloud 50, Maceo 30, and Joost bursts but seldom. Crane is too single and light in colour. Crocker is fine in colour, form and tissue, and is much liked. Over here nobody thinks of disbudding Carnations. The blooms are picked short and all the buds allowed to come along, as was done in America twelve or fifteen years ago.

"We have, besides, one class of Carnations, different from all the others called the 'Big Carnations.' They are fully 5in to 7in in diameter, and notwithstanding

that they are all bursters, I think they could be made to pay in America, for the colours are very fine, and they are preferred to anything else by American or English travellers. They are grown by but a few of the best growers, for they are difficult and require much care. They bloom all winter alongside the American varieties. They are grown in 7in pots and kept well staked.

"Camellias are grown here very extensively. They are shipped all over Germany, North Italy, Switzerland, Austria, and largely in Russia, for they have the quality of lasting twelve or fifteen days. Stocks are a staple, very fine, in all shades but mostly white and pink, also Daffodils, many Anemones, Daisies, the large white and yellow ones; Callas and Gladioli. Freesia is simply a weed, but all of the yellow variety. Acacia is a stand-by crop, and is sold by tons. We have Acacias 15ft to 50ft high, in many species, such as *sempervirens*, *dealbata*, *cultriformis*, *microphylla*, *floribunda*, and six or eight others. Violets are abundant, and much cheaper than in America.

"Chrysanthemums are grown by everybody, but few grow them well. Last October at the Geneva exhibition many very large and beautiful blooms were shown, but only by four or five growers out of the very many hundreds who grow flowers at Geneva. I have planted 3,000 Chrysanthemums, and have more to plant yet,



and my brother will plant about as many. Of these 750 are Modesto, 550 Hill, our best early pink; 550 Robinson, 550 Soleil d'Octobre, 200 Carnot, 200 Warren, 150 Niveus, and about fifteen other varieties. We are short on late and middle season pink.

"I have tried three years to sell Sweet Peas. The people here say Peas are only for eating! They grow and bloom splendidly but cannot be sold. A lot of annuals are grown here, such as Candytuft, Gypsophila, Mignonette, Myosotis, and so forth, also Cyclamens, Ericas, Gardenias, and Epacris, all outside. A Geranium when planted in the garden is there for all time, and a Heliotrope will last for fifty years.

"One of my brothers has planted 15,000 *Clivia miniata* of the finest strain; he sends the blooms to Berlin. We are very anxious now about the new tariff that Kaiser William wants to put on flowers, and mad with our rotten railway."

## Gadding and Gathering.

"HERE AWA', THERE AWA'."

### A Day in Kent.

The position of Kent as a county, and the nature of its features, together with the fertility of its soil, have contributed to its past and present distinction as a great garden and fruit nursery. It is south of London, while north and east the unending sea, the highway for the ships of the world, washes its boundaries. The chalky Downs of Kent are apparent to the Continental stranger while yet he is far off, and Dover is his land-mark. This was the route in the time of the Normans, and is the line of passage to-day. The sunshine and the soil in Kent afford pre-eminence to the culture of Apples, Plums, Cherries, Pears, Gooseberries, Strawberries, Raspberries, Currants, and Hops, and foolish indeed would Kentish men be to neglect these blessings of Providence.

Since Mr. Gladstone urged the culture of fruit, and particularly of Strawberries, as a counteraction to the agricultural depression, thousands of acres have been laid down, with the result that a year of plenteousness is a year of loss indeed to the fruit-growers, and Mr. Henry Cannell said to me one day last week, "You have only to mention Strawberries up there"—pointing to a farm—"to be knocked down." He gave me a paper in which I find the following paragraph, entitled a—

#### "GLUT IN STRAWBERRIES."

"A few weeks ago, when we had a succession of rain, hail, and frost, it was generally anticipated that this would be a bad fruit year, and that there would be a great scarcity of Strawberries. The altered climatic conditions, however, suddenly changed the whole outlook, and the season now promises to be memorable for the large crops of the 'king of fruits.' The London markets have been completely glutted this week by the heavy consignments of this luscious fruit, and the result has been that no higher price than 1s. 6d. a peck is obtainable. On Monday, July 14, in Mr. E. Vinson's fields, near Swanley, no less than 3,000 pecks of Strawberries were picked, being a record gathering on his farm, and before breakfast on Tuesday morning 1,200 peck baskets had been filled by the pickers. On Monday, at Bexley Railway Station, thirteen truck loads of the fruit were despatched to London, and every day the roads between the Swanley district and London have been crowded night and day with vehicles, including motor waggons, bearing their freights of Strawberries for the Metropolis."

The same story was applicable to Hampshire, and we noted the price of Strawberries at 2d. per lb on the costers' barrows in Fleet Street. The effect of such quantities of Strawberries filling the markets is to cause a slump in prices. The result of that, again, may be that growers will plant fewer acres, until in ordinary years prices are profitable all the way through for them. They may even plant less than the demand would require, and prices for fresh fruits would then rise high even with good weather. In the Coffee industry abroad there is a constant see-saw in production. The Coffee plants require seven or eight years to become fruitful from the time of planting. Large plantations having been made owing to the high prices obtainable at one time, the production of Coffee beans became greater than the demand, and prices fell; growers refused to plant; but again in three or four years a strong upward tendency became apparent, and with the rise in returns, the growers again plant "not wisely, but too well," and sooner or later another dip occurs. Statistics over thirty or forty years show regular rises and falls in the output in Coffee, solely owing to this cause.

#### Motor Cars are Used.

It is interesting to note the fact that Messrs. Wood, the great fruit farmers, who have 500,000 acres under their charge, are now employing motor cars, which draw eight tons of produce into Covent Garden Market on each journey. Other growers will assuredly follow suit. The same firm are able to employ steam ploughs for tillage, and as they have a little foundry of their

own, and capable artisans, the whole of the necessary repairs in connection with their numerous vans, carts, waggons, as well as horse-shoeing, &c., can be accomplished expeditiously, and at the least cost, under their own supervision. There are a number of brothers in the business, and the telephone connects all the branches of the great farm. The state and needs of the London and other great markets being telegraphed to the central quarters, he in command there at once telephones right and left to the branch offices on the estate, and boys commit the orders to the "gangers" in the fields. Then there is stir among the pickers and gatherers. Each is supplied with a check, for piecework is the rule everywhere—so much per peck of fruit gathered. On delivering this check, another is given in exchange and the amount of fruit just handed in is put to the picker's credit in a book kept by the foreman. Formerly each packer was paid daily, the paymaster visiting the different fields late in the afternoon on horse-back or in a dog-cart, but now I believe that weekly payments are the rule.

#### Kentish Fruit Pickers.

The pickers are nearly all from the slums of London, a ragged, unkempt crowd. A description of the worst of them would best suit the pages of "Punch" or "Judy," yet they are looked upon by the farmers as their great salvation. Labour of the usual stamp cannot, absolutely cannot, be got unless at unspeakable wages, but these poor, shiftless wretches from the dingy courts and alleys flock down to Kent at the beginning of every summer, and linger on till the Hops are all gleaned in September. Many of them journey back to the East End on a Saturday in the dirtiest and plainest of railway carriages, each carriage choked full with men, women, children, old-clothes, and beer and whisky bottles. To see them arrive at London Bridge is a sight to wonder at, and never to be forgotten.

#### The Season's Crops.

From what I learned of Kent crops in general, the season promises to be thoroughly satisfactory. Currants are all good, Raspberries are also ripe now, and in a fortnight the Early Rivers Plums will come into season; and Cherries are heavy so far as one could see. Very few of the old-fashioned grass orchards are now remaining, though full many an acre still runs wild, yielding old Gerarde's Traveller's Joy (*Clematis vitalba*) and little else. It is a matter for comment, too, that the hedges surrounding the orchards are so overgrown and untrimmed as they are. I yield to none in my admiration for the exceeding beauty and interest of these rural hedgerows with their ferny and flowery lanes, but where they affect the utilitarian aspect, as in the cultivated parts of Kent, I confess my judgment goes against them. They may, or they may not, harbour insects and fungi, but they certainly do shade much of the land and crops. On the grounds of shelter, not half of them are required, and even then a less height and breadth would surely suffice. It is a welcome sight, however, to notice the many renewed Apple orchards, with splendidly formed young trees. These are not summer pruned, but they are gone over every winter and trimmed into shape and fruitfulness. Damson and Plum trees are short-lived, and require to be oftener uprooted. Gooseberries are mostly grown beneath the taller trees.

#### Breezy Eynsford.

The seed grounds of Messrs. Cannell and Sons are two and a half miles south from Swanley, and a brief evening visit was paid after having been at the home nursery and over to the college. How hard and dry the soil seemed after the storms and the baking sunrays which followed. Truth it was that the ground was hard, but not so dry, even though the lands slope face to face and form a broad and long valley. It is here that the Clarkias nod and the great red Peppies cast their flaring petals. But one must needs calm down, and it suffices for this wandering scribe to name sedately those varieties of annual flowers whose excellencies gave them distinction in these grounds.

The grace of the Clarkias is proverbial, and *C. pulchella alba*, with flowers of absolute whiteness; *Clarkia elegans* Mrs. Langtry, a rich deep mauve; *C. pulchella fl.-pl.*, rosy and double flowered, and *C. Salmon Queen*, one of the most beautiful of all annuals, come to mind. They are all worthy of their place.

*Nemesia strumosa*, in all colours of the rainbow except the blues, though "miffy" growers, at the same time always produce a gorgeously brilliant inflorescence. This is one of the finest annuals recently brought to the front. *Cosmos bipinnata alba* is grown largely because of its exceedingly graceful mien, having finely pinnately dissected green foliage. A *Tropæolum* (*Nasturtium*) briefly named "Scarlet," presented a dazzling show, and the *Papaver caryophylloides*, a double Carnation-flowered form, 2ft high, bears handsome flowers coloured rose and white. For the edges of a shrubbery it commends itself. *Tropæolum Empress of India* should have been mentioned. It bears rich crimson flowers, and has dark foliage.

Another little gem when seen at its best is *Verbena ericoides alba*, which is largely grown both in the north and the south. As a bee-flower it has few equals, and is dwarf enough for edging purposes. *Linum grandiflorum rubrum* and *Centaurea maritima*

require no praise, neither do the selected strains of Shirley Poppies, or Verbenas which are now offered. A deep purple Candytuft, unnamed, was especially distinctive, and the handsome Larkspurs in many blue and violet-purple hues stood out prominently and well. And lastly (for my visit here was brief) I would bring to the notice of any who have not seen it, a variety of *Antirrhinum majus*, named *nigrans*, with long and stout racemes of noble amaranth-crimson flowers. This, with *A. m. Youngi*, deep amaranth, are two border plants of rare merit. *Geranium platypetalum* is cultivated in quantity for its foliage, which changes to crimson in autumn. Sweet Peas and hardy herbaceous flowers, with culinary Peas, and a splendid array of the different vegetables for seeds, completed the subjects seen in this survey of Eynsford. The stay would have been prolonged, but the hands of the clock pointed the hour of my train's arrival, and a sharp drive to the station just brought me there in time.—

#### Zonal Pelargoniums.

Every gardener understands the value of Zonal Pelargoniums for the production and supply of cut flowers during the winter months. In the following lines I name a number of varieties whose merits have not previously been made known, and of each of which the very highest praise can be given. They are mostly *M. Bruant's* novelties, but Messrs. Cannell and Sons have now a goodly stock of them. In doubles we have *Captain Flayelle*, after the habit of King of Denmark, known and appreciated for its robustness of growth. This habit or character has been imparted to a large number of the later varieties, and ample, healthy leafage is not objected to.

Another of the finest is *M. Anatole Roseleur*, an excellent rose-pink variety with large semi-double flowers. *Tresor* is salmon, striped with a lighter shade of the same colour, and is also good. Again in salmon shade we have *Madelaine Lemaire*, which is really blush-salmon, and carries flowers of an enormous size. *Olive Schreiner* is rich red at the edges, with almost a white centre, and is classed as a *Picotee*-edged sort. *Cousin Bele* is also salmon-blush, while *Le Colosse*, a semi-double, is a bright fiery scarlet. *Thomas Meehan* having gigantic flowers presents a deep crimson salmon tint. In *Transvaal* we have a very brilliant rosy-scarlet flower; and *Golden Glory* is the best of all the orange-scarlets. Lastly, I would name *Miss Ashworth*, which is spoken of as the finest double white.

Then there are a number of new and superior single Zonal Pelargoniums. *St. Cecilia* is a splendid salmon-rose; *Lady Roscoe* with the same tint as in peach-blossom is decidedly beautiful, and *Barbara Hope*, a good rich flesh-pink suffused with orange, is also outstanding. *T. E. Green* might be described as orange-scarlet, and is one of the most brilliant flowers of all. *Lady Brook* conveys a very delicate light pink and white; while *Mons. Calvat* is a handsome crimson; though old and well-known, one still finds the variety *H. Cannell, jun.*, with its dark crimson flowers, a prime favourite. Concluding the list we have an all-round Zonal in *King Edward VII.*, but whose great quality lies in brilliance and richness for bedding uses. It seems to be a sport reversion to the true deep blackish-crimson *Henry Jacoby*, which variety is so very much confused in collections nowadays. Seen on a sunny slope, the floriferous character and large trusses of *King Edward VII.* presented a rich and glorious effect.

#### Begonias and Cannas.

The strain of single and double Begonias included some wonderfully bright varieties, and among the species the little-known *B. Martiana* with bright rose-pink single flowers, borne on short stalks close to the fleshy erect stems, was indeed very beautiful. The Cannas from here are absolutely unexcelled, and batch after batch are to be seen "coming on" in rotation. The rootstocks are potted into 5in or 6in pots, never larger, and with only moderately firm packing of the soil. The great secret of their huge flower-spikes would seem to be in feeding, which is started so soon as the first appearances of a flower begin to show. They are grown on ash-covered stages, in low span-roofed houses, so that the foliage is quite close to the glass.

Cockscombs make a grand feature, and it is not often that a "comb" of 30in in circumference from one side to the other can be noted. Nor was this seen now, but Mr. Cannell's foreman vouches for it, and with him I leave the record.

The succulent house is at all times very interesting and unsurpassed in the richness of its variety. *Echeveria farinosa*, so pretty as an edging plant for dry places, struck me as being particularly desirable, and were I a gardener again, there are many of these strange looking plants which I would gather together into a collection.

Passing the bedding Lobelias in the open frames, the brightness of one or two attracted attention, and good Lobelias are always welcomed by him who has much bedding to do. *Swanley Blue* is deeply coloured yet very bright withal, and has a white eye. *King of the Blues* is indigo and richly toned, with a large white eye. *Beauty of Darmstadt* is a deep, glowing, gentian-blue, and has no white eye, or at least only a speck. The *Brighton*

*Blue* is a washed-out, poor colour, and is not commended. Is it hopeless to desire a yellow and a good red dwarf bedding Lobelia? The word "impossible" has at times lost the affix.

#### At the Horticultural College.

Under a heating sun, and on dusty roads, one cared little for the general scene on either side, on the way to the college. It was Prize Day there, the day of all the year for those who so bravely work and study at that interesting institution. Parents, brothers, sisters and friends had been invited to come and see what progress was being made, and after the prize distribution the whole company flocked out to the typical green and smooth shaven English lawn for tea, or iced drinks and fruit.

Sir John Cockburn, late Agent-General for South Australia, presented the prizes, and his geniality of countenance attracted special interest to his speeches. Sir Joshua Fitch, who presided, opened the proceedings by congratulating the governors of the Horticultural College on the steady progress which the institution was making, and one remarkable feature was the increase in the number of female students. During the reign of the late Queen various employments had been opened to ladies from which not so very long ago they were absolutely excluded. He was in favour of everything which opened honourable and lucrative occupations to women, and there was none for which they were more suited than gardening, and those who received proper education and training in that institution had no difficulty in obtaining employment. Gardening was a healthy and delightful occupation, and he strongly recommended all the students present to read Bacon's charming essay on gardens.

Sir John Cockburn said some of them might regard his presence there as an indication of the colonial invasion. He recommended them in their turn to invade the colonies, and assured them that any of those who had obtained a knowledge of gardening in that college would receive a cordial welcome in Australia. Sir John also said that one of the most satisfactory points of the college was the ease with which the lady students obtained lucrative employment, 90 per cent. of those who had passed last year having been successful in obtaining appointments as gardeners. Indeed, so successful have the ladies been in the examinations, including practical work in the garden, even down to mowing with scythes, that it has been decided to make the institution a women's college, exclusive of all men students.

Since the new range of glass houses was completed the garden has been greatly enhanced as a station for practical teaching. The north field lying to the back of the ranges, has been converted to an admirable vegetable garden, and I have certainly never seen the students' plots in better or brighter condition than they are this summer. The Rose garden, opened only two years ago, in the presence of Dean Hole, is in splendid vigour, and loads of fine flowers have rewarded the attentions of the student gardeners. This is all the more creditable considering that the soil is of a light and sandy character. A beautiful pergola, similar to the sixteenth century "galleries," has been erected for climbing Roses, and will add greatly to the beauty of the garden.

The new conservatories are filled with a miscellaneous collection of suitable plants, including *Hydrangea hortensis*, Ivy-leaved Pelargoniums, Cannas, Oleanders, Carnations, *Hedychium coronarium*, Begonias, Gloxinias, Abutilons, Eupatoriums, Schizanthus, Palms, and other subjects, including a specimen *Tropaeolum Fireball* on the roof, and the beautiful *Maurandya Barclayana* on a side wall, but it is hoped that even an improved selection will be got together in course of time. The houses are nicely arranged and well built, though the ventilating apparatus could have been improved.

In the other and older span-roofed houses there are excellent crops of Cucumbers, Tomatoes, Melons, and Grapes, each in highly creditable condition. Under the direction of Mr. H. Patterson, late of the Royal Gardens, Kew, the practical work has assumed a new and higher importance, and certainly it is a fact that the garden smiles more distinctly than it has ever done before. As the garden is to be devoted to women, and is under the management of a committee of the fair sex, the resident principal, a gentleman who has made himself much respected during his term of office at Swanley, terminates his period there on the last day of this month, and we wish him success in his new sphere of usefulness.—WANDERING WILLIE.

#### The Value of a Garden.

There would certainly be more loafers at Piccadilly Corner, more loungers in music halls, more dull-eyed fools hanging over tavern counters (says a daily paper) if there were no gardens in our suburbs. A man's home means to many a clerk his garden, and when the City clocks strike six, and all those black coats go swarming off to omnibus, railway, and tramway car, be sure some of that haste is magnetised by the little garden across the water where spring is just beginning to force an urban smile.



## An Evening with the Microscope.\*

Our subject this evening is one a little removed from the ordinary course of practical gardening; that is to say, it is not one on the cultivation of plants, fruit, or vegetables; but it is "An Evening with the Microscope," and, although this may appear to some a dry and uninteresting subject, I sincerely trust not one of you will return home without the satisfaction of having heard or knowing something you never knew before, and which may, to some extent, give you some satisfaction for your attendance here. A microscope is one of the most useful instruments that a gardener can possess, whether it be in the simple form of a single or treble pocket lens, or mounted on a brass stand and fitted up with numerous eye-pieces, objectives, &c., for higher magnifying powers and a greater field of study. By its use it reveals to him the presence or absence of many insect enemies that are totally obscure and undiscernible to the naked eye, and which, if allowed to establish themselves in quantity, would prove very injurious to plant life, and much more difficult to eradicate. It also enables him to examine valuable plants when in a sickly condition, to find out whether it is caused by dreaded fungus in various forms, or from other effects. To the botanist it is invaluable, as by its use he examines the structure of the growth of wood, shoots, stems, flowers, and foliage of plants, which enables him to classify them in their various orders, genera, and species, so as to ultimately discover whether the plant under examination is, or is not, recorded in botanical history.

The first microscope I ever saw was a small single pocket lens. When I was apprentice, the gardener was examining some Peach tree leaves that I had syringed the previous day with insecticide to kill red spider, and I was curious enough to ask permission to look through it, which favour was granted: at the same time I was informed that if I intended to be a gardener I must quickly get into possession of a similar instrument, and must also make myself thoroughly acquainted with insect enemies, and with botany. Outside the garden boundary was an enclosure for hay, which was gaily decorated with abundance of yellow flowers, and, as though I was a manufactured expert, he said, "Jim, what is the botanical name of those yellow flowers?" "Why, Dandelions!" said I. "No," said he, "it is *Taraxacum officinale*." I thought to myself if that is a botanical name, I don't want many of them; but, bucking up courage, I walked three miles to buy a pocket microscope, and, having fortified myself with a copy of Lindley's "School Botany," which was closely followed with a copy of Macgillivray's "British Wild Flowers" and Hooker's "British Flora," together with a botanist's collecting case, I soon felt myself in the enviable position of being a full-blown botanist—with everything to learn however!

After having acquired a certain amount of knowledge on the subject, as time went on I found there was an upheaval going on in the gardening world, and except in strictly botanical gardens the botanist had to give way to the gardener of decorative skill, and the prize-takers of flowers, plants, fruit, and vegetables. But a further change has taken place, and at the present time I think I am safe in saying that the gardener in most demand is that class of men that do the most for the least money, or who can plant a fruit tree overnight and find a crop of fruit on it the next morning. Can this be wondered at, considering the enormous amount of garden produce of all kinds imported into this country from all parts of the world at ridiculously low prices? We live in a fast age, when rapidity of transit, whether by locomotion or navigation, is the order of the day. Steam navigation and railways have revolutionised the world. Yet be not discouraged, gardeners have always been wanted, and have existed from the days of Adam to the present time, and that gardener who fortifies himself with the greatest amount of knowledge in readiness to occupy any position in life, botanical or otherwise, is the most likely man to secure a good position when it presents itself. When living in Scotland, I had a young man with me that imbibed the idea that he would like to acquire a knowledge of botany, so I asked him if he would remember the botanical name of Dandelion if I would tell him. He instantly assured me he would, and when I told him it was *Taraxacum officinale*, he replied, "Master, I could never remember that name; it is as long as the Caledonian Railway." Such are the general impressions of the young aspirant when a difficult task presents itself; but the youth with a determined mind invariably surmounts the difficulty; but I would here warn the ambitious man who yearns for a thorough knowledge of botany that to devote too much time to this study, and neglect

the other principal branches of the work; would be fatal to his prospects as a practical gardener. We are told by the Dean of Rochester in his "Book on Roses," page 125, "I never remember to have seen a scientific botanist and a successful practical florist under the same hat," &c., &c.

It is now desirable that we should make ourselves acquainted with the instrument in question, also its numerous parts, and the use of the same. I will therefore proceed to briefly describe them. The first of the kind I ever possessed was a pocket lens; but you will observe there are three lenses, each one giving increased magnifying powers, it is the instrument in common use with gardeners and botanists. In the ordinary way it is found amply sufficient for general purposes; but aspiring to higher class instruments for greater magnifying powers we find them of a very different construction. This is a binocular instrument, i.e., you can see the object exposed on the stage with both eyes at the same time. It was considered one of the best at the time it was made. This is the tripod stand, the feet being movable for the convenience of packing in small compass; this is the circular base to which the feet are secured. I may here say there is a little history attached to this instrument, which is vouched for by the inscription on it—viz., "Presented by the members of the Liverpool Naturalists' Field Club to the Rev. William Banister, M.A., in acknowledgment of his assiduous and successful exertions as honorary secretary, December, 1866." You will notice the base is in two portions, the upper swivels round for adjusting the instrument. This is the upright limb, with movable joint, for inclining it into any position. This is the principal limb that carries the body of the instrument; these two small milled heads and screws are for holding the side silver and glass reflectors; the larger milled heads, with pinion for rackwork underneath, is for quick adjustment when focussing. The body is supported by the strong limb. This milled head, with these racks and pinions, is for focussing the eye pieces, and this one at the lower end of the body is for very fine adjustments. These are the sliding sockets, worked by rack and pinion, for focussing the eye pieces, of which there are three pairs, with various magnifying powers. No. 1, the longest, is the lowest, and of the short ones, No. 3 has the highest power. They are fitted with sliding caps, and blackened to prevent any glare to the eyes when viewing the objects. This is an improved form of cap, sloped to fit over the eyes tightly, and effectually excludes the light or glare of lamp from the eyes when objects are being examined. This is a slot for the insertion of a micrometer for measuring objects. This one is fitted with a Quekett indicator for small objects. This is the draw tube to lengthen the limb as desired, more particularly to make an object fill up the whole of the field of view. It has a scale for recording the length of focus and to calculate the magnifying power; it is also used with the erecting glass and two-third object glass for extending or reducing the magnifying power without changing the object glass, more particularly for dissection and manipulating purposes.

You will notice one limb of the instrument looks direct to the object on the stage, and the other is fixed obliquely to it, so that it would seem impossible to see the object on the stage with the left eye, but this difficulty is overcome by the insertion of a small Wenham prism at the lower end of the body of the instrument, and is held in position by a small spring; thus the object on the stage is reflected up the left limb of the body, so that it can thus be distinctly seen with both eyes at the same time. This is a triple nose-piece, and is an invaluable acquisition to the microscopist, as by its use three objectives of various powers can be fixed on the instrument at once, and each objective swivel round to the field of view in a second, thus dispensing with the necessity of waiting to screw off and on each objective separately. Thus if the object can be seen to better advantage with a low power, or vice versa, they can be instantly applied to the object.

These are the objectives of various magnifying powers, the lowest being three inch, and the highest one-tenth of an inch. The approximate range of their powers is from about thirty to one thousand five hundred and over. Those I mostly use are the three inch, inch and a half, and two-thirds. There are many specimens that look most beautiful under the low powers, because they are not too much magnified to penetrate deeply into them, whereas if closer details of the subject under examination is desired the higher powers can be quickly swivelled into the field of view to obtain them.

This is the stage on which the objects for examination are placed or fixed by means of the springs provided for the purpose. The lower portion is fixed to the main limb, and has a circular hole in the centre of it to allow the transmitted light from below to pass to the object on the stage, whether it be from the mirror, Wenham's Parabola, Amici, or Nacet's prisms, or polarised light from Nicol's prisms. Into this fixed portion others are made to work in grooves by means of the milled heads, pinions, and rackwork, so that the object can be moved up or down, or from right to left, as desired; it also revolves, so that the object can

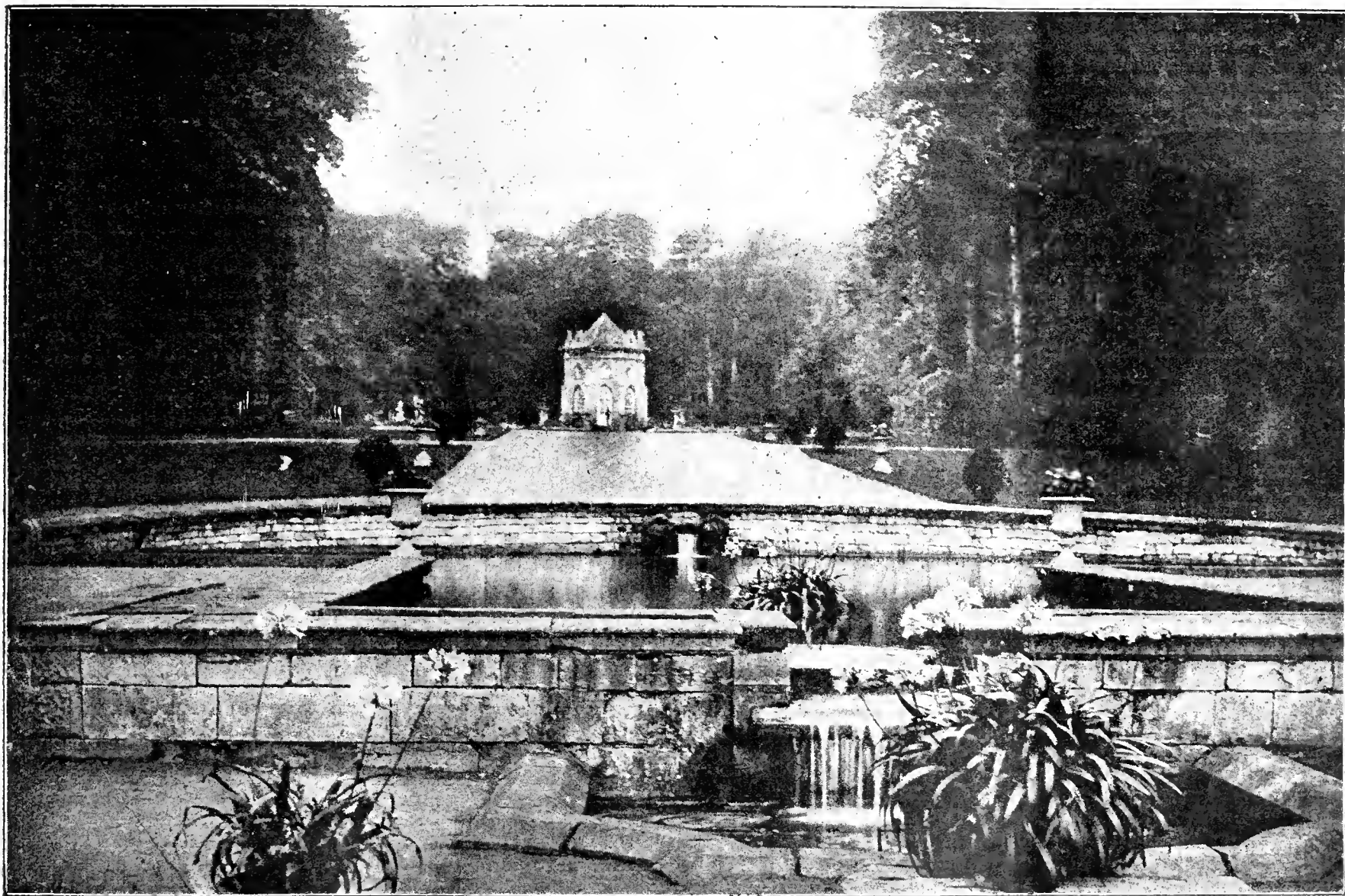
\* Paper read by Mr. J. Ollerhead at a meeting of the Wimbledon and District Gardeners' Mutual Improvement Society, February 17th, 1902. The subject being again brought forward on March 17th, after a discussion on Roses in pots.

be rotated. The upper portion is provided with a ledge at bottom, and a sliding fitting at the top, with springs for clamping the objects firm to the stage. It has also a socket at the corner for holding the forceps when in use.

Immediately under the stage is a grooved fitting with pinion and milled heads for carrying the sub-stage, and cylindrical fittings to receive all kinds of illuminating apparatus which are required below the stage. The stem tube is fixed to the lower part of the main limb for carrying the mirror and white cloud illuminator. This is the lengthening arm to mirror for giving oblique side illumination, and this the semi-circle in which the mirror swings. When using artificial light, it is very desirable to have a proper lamp that can easily be adjusted to various heights to suit transparent or opaque objects. This is one of Messrs. Becks, and is a very useful one; the shade intercepts the glaring light from the eyes of the observer.

For high power objectives that cannot be advantageously used with Lieberkuhns for opaque objects, Messrs. Beck have invented this patent illuminator, into which they have introduced a disc of thin glass attached to a milled head, and by rotating the same, any angle of light can be exactly adjusted. This appliance is introduced by a slot into the interior of an adapter between the objective and the nose-piece of the microscope. The light enters through the aperture, and is reflected downwards to the object beneath.

The camera lucida is a very useful appliance. The eye-piece of the microscope should be placed at an elevation of ten inches from the table, the object on the stage being properly focussed. The eye shade is removed and the camera slipped on in its place. A piece of white paper is then put on the table, and the iris of the eye should be in a position to see through the prism and also on to the paper. The result will be that the object under



**A Placid Effect in Garden Design.** (See page 78.)

There are several methods of condensing the light and throwing it more intensely from the lamp to the object under observation. Here is the bull's-eye condenser, one that is mostly used for concentrating the light from the mirror to the object on the stage. This is the small condensing lens for fitting on to the main limb of the instrument for the illumination of opaque or other objects from above, and the blue glass moderator is used to tone down the glare when too intense for the eyes. The silver side reflector is used with the bull's-eye, one on each side of the instrument, to reflect the light on both sides of subjects that are of an uneven nature, such as minerals, mounted as opaque objects, otherwise one side would be illuminated and the other side would be in the shade. The parabolic Lieberkuhn is used for a similar purpose: it slides on to the objectives. The ordinary Lieberkuhns also slide on to the objectives in the same way, but they reflect the light direct on to the object from above; and should the object be too transparent, then by fixing the dark wells in the sub-stage it will be seen on a beautiful dark ground,

observation will be reflected through the camera to the paper below, and can thus be clearly defined, traced or drawn by following the reflections. Thus minute objects can be drawn that could not otherwise be obtained.

(To be continued.)

#### The Moon and Thunderstorms.

A connection between thunderstorms and the moon's phases is now claimed by meteorologists. Some months ago a greater frequency of such storms at new moon than at full moon was noticed in the records at Greenwich for thirteen years, and from other inquiry it appears that Madrid observations for twenty years give similar evidence. The Spanish records show 29 per cent. of the thunderstorms near new moon, 22.8 near first quarter, 21.8 near full moon, and 26.4 near last quarter.





### Malcolm Dunn Memorial Fund.

It has now been arranged that the Royal Scottish Arboricultural Society is to retain the money collected by it in order to create a Dunn Memorial in connection with arboriculture. The Royal Caledonian Horticultural Society and the Scottish Horticultural Association have united the funds collected by each of them and have formed a "Malcolm Dunn Memorial in Horticulture." They have appointed trustees to carry out the purposes of the trust. These trustees are authorised to give prizes for the advancement and improvement of the science and practice of the culture or for the successful culture of plants, flowers, trees, fruits, and vegetables, or otherwise for the advancement and practice of horticulture, as the trustees shall think fit, and it is further directed that these prizes may be given through the medium of any horticultural society or association in Scotland. The trustees have appointed me their secretary and treasurer, and I shall be glad to answer any communications in connection with the trust.—P. MURRAY THOMSON.

### Destroying Red Spider on Vines.

In replying to Mr. A. Jefferies' criticism (on page 57), let me at once say that I have very little to add to that already advanced on page 24. I there stated clearly that it was seldom safe to vaporise Muscats with XL All compound sufficiently strong to kill red spider without also injuring the Vines, although I gave an instance in which I had done so successfully. I do not pretend to explain the mystery, and I was agreeably surprised myself at the time. On Black Hamburgs, however, I have frequently completely destroyed red spider solely by the aid of XL All, and I have no doubt others can do so too if they do not defer the attempt until the insects have become hardened depredators. To kill red spider I used XL All on the first night, at an additional half strength to that given on the bottle. On the leaves I examined the next day the young insects were quite dead, the older ones alive, but not in the least "frisky." The next evening the vaporiser was used at double strength, and although I examined a great many leaves, I saw no live insects, neither have I had trouble with them since. After Mr. Jefferies' statement that he found red spider alive on Croton leaves after having been vaporised at nearly fifty times the usual strength, I am inclined to think that the Essex species are decidedly more "hardened criminals" than have yet swooped down on the Midlands.—H. D.

### Plants in Scotland.

Permit me to agree with what has been said by "D. C." in the Journal, and also by yourself in the brief comment added, regarding the Scottish climate and the hardness of plants. There is no doubt that the climate of the great portion of our northern land has been unjustly maligned, and that many plants people are afraid to try in Scottish gardens will succeed quite well. We must not, however, accept the experience of Mr. Osgood H. Mackenzie, at Inverewe, in Ross-shire, as entirely representative. All along the coast it may be said that the climate is much milder than in the Midlands of England; but if we go further inland we shall find that the conditions more nearly resemble those in the English Midlands. From Wigtownshire north on the west coast there is a warm belt, and it seems even milder as we approach Argyle and go north. I am referring to the mildness as evidenced by plant life, not by meteorological returns alone. The east coast, too, is wonderfully mild, as may be seen even at Edinburgh. If, however, you go into some of the inland counties there is a great difference. I find that plants from the west of South America, such as those from Chili, for example, do remarkably well, and generally prove hardier near the coast in Scotland than in many English gardens.

I have had a good deal of correspondence with growers of such things, and this is what my observation, supplemented by other information, has led me to conclude. One place not mentioned is that of the late Lord Malcolm, at Poltalloch in Argyle, where many reputedly tender shrubs thrive and attain a great size. Taking, however, an inland belt up the centre of Scotland, quite different conditions will generally be found to prevail. All the same, Scotland is not the land of frost and snow so many in the south seem to imagine. I recollect leaving a London suburban station on my way to Scotland one cold, late winter, and the tone of commiseration with which the porter in charge of one's luggage said, "It will be very cold in Scotland, sir." He was entirely wrong, so far as regards my own district and many more.—S. ARNOTT, Carsethorn, Kirkcudbrightshire.

## Societies.

### Royal Horticultural—Drill Hall, July 22nd.

The exhibition of the National Carnation and Picotee Society (Southern Section) being held in conjunction with the fortnightly meeting of the Royal Horticultural Society on Tuesday last, the Drill Hall was largely occupied with competitive exhibits of Carnations. Messrs. Ray's Cherries and various groups of hardy flowers further aided the general display.

#### Orchid Committee.

Very few Orchids were shown, but a splendid *Grammangis Ellisi* bearing a strong raceme of over twenty flowers, each deeply tinged with the handsome brown shade which gives it distinction, was conspicuous. This received a cultural commendation, and came from H. F. Simond, Esq. (gardener, Mr. Geo. E. Day), Woodthorpe, Beckenham. A well-flowered plant of *Dendrobium Falconeri* was sent by W. C. Walker, Esq. (gardener, Mr. Geo. Cragg), Percy Lodge, Winchmore Hill. *Cattleya Wiganiana* var., with segments of quite a new colour, salmon-mauve and purple lip, from Sir F. Wigan, Bart. (grower, Mr. W. H. Young), Clara Lawn, East Sheen, received an F.C.C., and Baron Schröder had a fine *Cypripedium Antigone*, pale purplish. Messrs. J. Veitch and Sons, Ltd., Chelsea, S.W., contributed *Laelio-Cattleya Aphrodite alba*, with six large flowers; *Cypripedium* x W. R. Lee, very handsomely spotted; *Laelia* x Helen, mauve and fimbriated lip, brown petals and sepals; L.-C. x Norba and *Cattleya Atalanta*.

#### Fruit and Vegetable Committee.

Messrs. W. Ray and Co., Mount Pleasant Nursery, Teynham, Kent, staged about thirty plates of Cherries, amongst which much fine fruit was shown. Black Heart, Amber Heart, Noble, Napoleon, Bigarreau, were amongst the best seen, and some branches covered with fruit, showed the vigour well. About twenty-five varieties were noticed.

Messrs. T. Rivers and Son, Sawbridgeworth, sent a good box of Duke of York Peach, from pot trees in cold house; the fruit was well coloured and even in size.

Messrs. James Veitch and Sons, Chelsea, sent the new Strawberry, Khedive, a cross between Lord Suffield and British Queen. The fruit was small and of a deep colour, fairly firm, and flavour very good. (Award of merit.)

H. P. Sturgis, Esq., Leatherhead (gardener, Mr. W. Peters), sent a fine box and two plants of the new Strawberry, named Jevons' Late Prolific. The plant seems free, and the fruit is long in shape, bright in colour, and fine in flavour. (First-class Certificate.)

Messrs. Cross and Son, Wisbech, sent a new Codlin Apple, Victoria. The fruit were about 2in diam., and the spurs on a separate plate were furnished.

From Henry Park, Esq., Trent Park, New Barnet, came six fine fruits of Coronation Tomatoes. Some must have weighed nearly 12oz, and were even and well coloured.

Mr. Geo. Lee, Clevedon, sent Gooseberries Scorpion and Red Currant La Versailles, represented by fine bunches of bright fruit.

Messrs. Robert Veitch and Son, Exeter, sent a plate of the Pea Glory of Devon, a useful Pea, well podded, with about ten seeds to each. The haulm also sent indicated vigour.

Mr. J. Hobday, Romford, Essex, sent a plate of the fine Pea Essex Hero, large well-filled pods, and very even.

W. Taylor, Esq., Hampton, sent a seedling Pea, Libra, the fruits of which were almost 8in in circumference, and nicely coloured.

Mr. Andrews, Campsea Ashe, staged a fine Black Currant, Campsea Ashe, the fruits were of fine size, and beautifully black.

#### Floral Committee.

Mr. Amos Perry again was largely represented by a collection of hardy flowers and aquatics. Amongst the former, *Campanula lactiflora cærulea*, *Ostrowskia magnifica*, *Iris aurea*, *Lilium Parryi* and *aurea*, with *Calochorti* in variety, were very fine. Amongst the latter were *Nymphae Marliacea carnea* and *N. chromatella* and many other interesting plants, shown very effectively in shallow pans. The many aquaria of varying sizes added much to the attractiveness of the exhibit. The Loganberry was also well shown on fruitful canes.

Messrs. Jones and Sons, of Shrewsbury, staged about seventy vases of Sweet Peas. The colours were very various, and amongst the most beautiful we noticed Venus, flesh pink; Lady Grisel Hamilton, rich mauve; Black Night, Baden Powell, Her Majesty, and Black Burpee. A good deal of the natural foliage was incorporated, and added much to the general effect.

Mr. M. Pritchard, of Christchurch, had a choice exhibit of hardy flowers, in which Phlox in variety (Denis Puck, quite a mauve, and Ball of Fire, a deep cerise, being very fine), *Centaurea ruthenica*, *Lilium dalmaticum* (a lovely deep crimson

flower), Campanulas, Achilleas, and Scabiosas in variety were items worthy of notice in an interesting and well staged group.

Messrs. W. Cutbush and Sons, Highgate, staged an effective and well arranged group of Malmaison Carnations with Palms and *Adiantum cuneatum*. *Cecilia*, *Nautilus*, *Baldwin*, and the new one, *Maggie Hodgson*, with *Sault*, *Mr. Trelawney*, and *Princess of Wales* were all fine specimens of this charming flower.

Messrs. J. Cheal and Sons, Crawley, had a small exhibit of hardy flowers and Sweet Peas. Amongst the former *Galega officinalis* and *Coreopsis grandiflora* were well shown, and *Celestial*, *Shadzada*, *Cardinal*, and *Mrs. Eckford* were charming examples of Sweet Peas.

Messrs. Jas. Veitch and Sons, Limited, Chelsea, had a charming exhibit of *Nymphæas* in bowls, amongst *Pteris* and *Bamboos*, against the entrance. A fine specimen of *Yucca recurva* was an object of great interest. Amongst the *Nymphæas* staged, *N. Marliacea rubro-punctata*, *N. Marliacea carnea*, *N. Ellisiana* and *atro-purpurea*, and *albida* were interesting specimens.

Messrs. John Peed and Sons, Norwood Road, S.E., staged a collection of Tree and Malmaison Carnations and a few border varieties. *Cecilia*, *R. H. Measures*, *J. Coles*, *Dorothy*, and *Winnie Peed* were well flowered specimens. *Bamboos*, *Aralia Veitchi* and *Palms* were incorporated in the exhibit.

Messrs. Barr and Sons, Covent Garden, were again in their accustomed place with hardy flowers, aquatics and Sweet Peas, *Normanda*, *Didymus rosea*, *Ceanothus Gloire de Versailles*, and *Achilleas*, *Eupatorium*, *tancetifolia*, and *Veronica longifolia rosea* were amongst the most interesting items in the former section. *Gladioli* were also staged in effective variety, and the *Nymphæas* in shallow pans were very pretty. *N. Marliacea albida* and *atro-purpurea* were chief amongst those shown.

From Regent's Park Botanic Gardens (head gardener, Mr. E. F. Hawes), came *Crimum eruentum*, represented by a fine plant with a spike bearing as many as six flowers fully expanded and about double that number to develop. A very effective inflorescence.

Messrs. James Veitch and Sons, Limited, Chelsea, sent *Lilium concolor*, the true type, a lovely, deeper orange, and the perianth segments beautifully reflexed. The leaves are about 1½ in by ¾ in, and lanceolate linear in shape. The height of the plant over all is about 12 in to 15 in. Messrs. W. Bull and Sons, Chelsea, exhibited *Maranta insignis* from Brazil. It is effectively coloured in the leaves, which have small blotches of deeper green of varying sizes, but placed with great regularity throughout the entire surface. The petiole is about 5 in, and the blade or lamina 9 in to 10 in by 2½ in at its greatest width. Where the deep blotches occur, the portion of the leaf is raised. The under surface is a deep maroon. (Award of Merit.)

Mr. Charles Turner, from the Royal Nurseries, Slough, sent a fine bunch of that exquisite and popular Rose, *Caroline Testout*. The individual flowers were well finished. The same firm also exhibited *Rose Muriel Pike*—a very similar Rose to the former, but with much less colour. The perfume is almost identical. Messrs. B. R. Cant and Sons, Colchester, staged a charming exhibit of new Roses. The new seedling *Mr. B. R. Cant*, *Beryl*, and *Papa Gontier* were well shown. The grand new seedling *H.P. Ben Cant* and the new *H.P. Frau Karl Druschki* were both in splendid form, and *Mildred Grant* was also in fine form. Messrs. W. Paul and Son, Waltham Cross, Herts, staged their new multiflora Rose *Waltham Rambler*. The inflorescences are closely compact, and the individual flowers are about 1½ in diameter and the petals white at base going to purple as the margin is approached. The vigour of this variety seems excellent.

Mr. Arthur W. Wade, Colchester, sent two bunches of *Lilium excelsum* and *Brownei*, represented by fine flowers. (Award of Merit.) Also *Ben Cant*, a grand new *H.P.*, with excellent vigour. The individual blooms are about 4 in in diameter and a depth of nearly 2 in. Colour rich crimson, form perfect, and perfume exquisite; individual petals beautifully waved. (Award of Merit.)

Messrs. W. Paul and Son, Waltham Cross, staged their new climbing Monthly Rose, *Field Marshal*. The blooms, which are deep crimson in colour, are of good substance and well furnished, and in some cases are well over 3 in in diameter.

Messrs. Paul and Son, Cheshunt, had a small exhibit of new Roses, in charming colours. Amongst those especially noticed were *Killarney*, *Frau Karl Druschki*, *Lady Moyra Beauclerc*, *Corallina* as a garden Tea, and *Leoni Lamesch* and *Eugénie Lamesch* as specimens of the *Polyantha* section, were very beautiful.

#### Medals.

FLORAL COMMITTEE.—Silver-gilt Flora for herbaceous flowers to Mr. M. Prichard, Christchurch, Hants. Silver-gilt Banksian for group of Carnations to Messrs. W. Cutbush, Highgate, N.; for group of hardy plants to Mr. Amos Perry, Winchmore Hill, N.; and for new Roses to Messrs. B. R. Cant and Sons, Colchester. Silver Flora for group of Sweet Peas to Messrs. Jones and Son, Shrewsbury. Silver Banksian for hardy *Nymphæas* to Messrs. James Veitch and Sons, Limited, Chelsea; and for group of hardy plants to Messrs. Barr and Sons, 12 and 13, King Street, W.C.

#### Awards.

The following awards were made to new plants:—*Maranta insignis* (Award of Merit), from Messrs. Bull and Sons.

Climbing Monthly Rose *Field Marshal*, from Messrs. Wm. Paul and Son. Award of Merit.

*H.P. Rose Ben Cant* (Award of Merit) from Messrs. B. R. Cant and Sons, Colchester.

*Cattleya Wiganiana*, from Sir Fred. Wigan, Bart. First Class Certificate.

### The National Carnation and Picotee (Southern Section).

A good exhibition was got together in the Drill Hall on Tuesday last, the blooms being large and clean on the whole, and quite creditable after such a season.

#### First Division.

The first prize was for twenty-four bizarre and flake Carnation blooms, dressed on cards, in not less than twelve sorts. Only three collections were staged, and Mr. Charles Turner, Slough, with distinctly larger flowers, all very clean, was placed first. Each flower was even, and nearly all were full in the centre, the weak ones being *Jas. Hall*, *Mrs. Tom Lord*, and *Sarah Payne*. The set included the following: *Sarah Payne*, *Edw. Adams*, *Autocrat*, *Geo. Herbert*, *Jas. Hall*, *Admiral Curzon*, *Thalia*, *Duke of York*, *Jas. Taylor*, *Chas. Henwood*, *Mrs. Tom Wood*, *Stains-on-Weir*, *Sir Garnet Wolseley*, *John Keet*, *Dr. Hogg*, *Ed. Adam*, and *Thaddeus*. The famous *Battersea* carnationist, Mr. Martin Rowan, was a fair second with good blooms of *Mars*, *Jas. Douglas*, *John Wormald*, *Merton*, *W. Skirving*, and *Constance Grahame*. The third prize here was awarded to Mr. Martin R. Smith (grower, Mr. Chas. Blick), *Warren House*, *Hayes*, *Kent*, whose flowers were large, but badly affected by rain.

Four entered for two dozen selfs in a dozen distinct varieties, and here Mr. Smith was far and away superior. His blooms were all strong and admirably staged. Taking them as they come, we find *Cecilia*, *Mike Farren* (grand colour), *Bomba*, *Ensign*, *Daffodil*, *Bridegroom*, *H. J. Cutbush*, *Much the Miller*, *Sir Beys*, *The Naiad*, *Gerda*, *Joan of Arc*, *Anne Boleyn*, *Grand Vizier*, *Agnes Sorrel*, *Comet*, *Mrs. Eric Hambro*, and *Roderick*. The colours were nicely disposed, the yellows being at the top. Mr. Chas. Turner had very good blooms, but too much flattened out. His scarlet coloured *Grand Duke* was a strong flower; and *Sir Beys* was rich and good. Third came Messrs. Blackmore and Langdon, *Twerton-on-Avon*, *Bath*, with *Rosina May* as their best.

The twenty-four Fancies from Mr. Smith were exceedingly fine, and wonderfully rich for the season. *Lily Duchess*, *Elaine*, *Bellicent*, *Argosy*, *Jack Spraggon*, *Pagan*, *Amphion*, *Molly Maguire*, *Caird*, *Author*, *Cavalier*, and *Carmen* were very handsome, full, and even. Charles Turner came second, and Messrs. Blackmore and Langdon third. Four entered.

Mr. M. Smith again led for the twenty-four white ground Picotees with *Muriam*, *Canymede*, *Mrs. Beswick*, *Little Phil*, and *Somerhill* as his best. Mr. C. Turner again followed second, and Messrs. Tuplin and Sons, *Newton Abbott*, third.

The yellow grounds were very rich and effective, Mr. Smith leading for the twenty-four in a dozen sorts. Here the most conspicuous flowers were *Espoir*, *Caliph*, *Aleinous*, *Childe Harold*, *Dalkeith*, *Lady St. Oswald*, *Miss Annie McCrae*, and *Fairy Queen*. Messrs. Turner and Tuplin and Sons again followed in this order.

Mr. Smith with *Cecilia*, which he grows so finely, led for six selfs of any one variety; Messrs. Blackmore and Langdon second with *Master F. Wall*; and third, Messrs. Tuplin and Sons with *Mr. J. Douglas*. In the succeeding class for six yellows or buff ground Fancy Carnations, Messrs. Blackmore and Langdon with *Willie Tyler*, very large, rich, and handsome; Mr. Smith second with *Mountjoy*; and Messrs. Tuplin and Sons third with *Sunset*.

Messrs. Blackmore and Langdon led for six Fancy varieties in Class 8 with the white ground *Millie*; second, Mr. Smith with *White Witch*; and third, Messrs. Tuplin and Sons with *Countess d'Archiac*.

Six yellow ground Picotees from Mr. Smith, in Class 9, were exceedingly handsome. He staged *Gronow*; and in the same class the second place fell to Messrs. Tuplin and Sons with *Empress Eugénie*. For the twelve Carnations, distinct, without dressing or cards, Mr. Smith was again unassailable, showing his blooms in three-forked patent stands. These were strong and capital sample blooms. Messrs. Blackmore and Langdon, second; and Messrs. Tuplin and Sons, third.

#### Specimen Blooms.

BIZARRES AND FLAKES.—Scarlet, single bloom: First, Mr. F. Wellesley, with *R. Houlgrave*; *R. C. Cartwright*, second. Purple: Mr. Wellesley here again led with *G. Melville*; and Mr. Nash, with *Guardsman*, scored for the crimson. Mr. Wellesley, with *Merton*, led for the rose bizarre. A better method of arranging the flowers would avoid confusion in reporting.



**SELFS.**—The whites were strong, and Mr. Wm. Spencer, jun., led with Much the Miller. Mr. Charrington, with Mrs. Siebright, was first in roses; Mr. M. Smith won in crimsons with H. J. Cutbush; for purples, Mr. F. Wellesley with Sir Bevis. The same exhibitor led for yellow with Germania; and Mr. Spencer in the forefront among buffs with Benbow. Competition was very keen, and numerous very fine flowers were presented.

**FANCIES.**—For a single yellow ground, Mr. Spencer, with Queen Bess, was foremost; and under "other Fancies" the same exhibitor had premier honours with a very handsome bloom of Artemis.

#### Picotees—Single Blooms.

Red, heavy-edged, Mr. F. Wellesley with Ganymede; light-edged, ditto, the same with Etna. Purple, heavy-edged, Mr. R. Sydenham with Fanny Tett; ditto, light-edge, Mr. Spencer with Lavinia. Rose or scarlet, heavy-edge, Mr. R. Sydenham with Mrs. Foster; light-edge, Mr. F. Wellesley with Fortrose. Yellow ground, heavy-edged, Mr. M. Smith with Lucy Glitte; light-edge, Mr. F. Wellesley with The Pilgrim.

#### Second Division.

For twelve Fancies, distinct, F. Wellesley, Esq. (grower, Mr. J. Gilbert), Westfield Common, Woking, was first, and closely followed by Messrs. Thomson, High Street, Birmingham; the third award falling to Messrs. Phillips and Taylor, Bracknell, Berks. In the leading set were Argosy, Helios, Mrs. F. Wellesley, and Voltaire, all very handsome.

Mr. F. Wellesley was easily first for the twelve white ground Picotees, with typical samples of W. H. Johnson, Lavinia, Mrs. Beswick, Fortrose, W. E. Dickson, and Favourite. Messrs. W. Pemberton and Son, Coal Pool, Walsall, with less refined blooms, came second; and Thomson and Co., third.

Five entered for the dozen yellow ground Picotees, Mr. Wellesley furnishing a very presentable set, the flowers being heavier than those of Mr. B. Nash; third came Messrs. Thomson and Co. The blooms were all clean, smooth, and nicely developed.

Half a dozen entered for the six self Carnations, the premier honours falling to Mr. F. Wellesley with Benbow (only one weak bloom); second to Messrs. Thomson and Co., with Mrs. Eric Hambro; and third, Messrs. Phillips and Taylor, with Cecilia.

Again Mr. Wellesley scored in the following class for six yellow ground Fancies, having Argosy; second, Messrs. Thomson and Co., with Galileo, very rich purple; and third, Messrs. Phillips and Bracknell, Berks.

For six yellow ground Picotees, Mr. Wellesley, with beautifully edged blooms of Lady St. Oswald, led out of five. Second came Mr. B. Nash, with Mrs. Tremayne; and third, Thomson and Co., with Mohican.

The succeeding class was for six distinct Carnations, selfs and Fancies, three blooms of each. Mr. F. Wellesley with perfect flowers, well set up, beat his opponents, four in number. Messrs. Thomson and Co. succeeded, also with fair flowers; and third, Messrs. Phillips and Taylor, their best being Lady Hermione.

#### Third Division.

Starting at Class 25 for six bizarres and flakes, Mr. J. J. Keen, of 37, Avenue Road, Southampton, with blooms equal to the best. Mr. Jas. Fairlie was placed second; and Mr. A. Greenfield, Sutton, Surrey, third. For six selfs in Class 26, the leading place was taken by Mr. W. Spencer, jun., Bexley Villas, Windsor; Mr. R. C. Cartwright, King's Norton, Worcestershire, second; and Mr. E. Charrington, Mayfield, Chislehurst, came third. The blooms were all of merit; six entered. Again Mr. Spencer well deserved the first prize for six Fancies, his blooms being very large, nicely coloured, and good in form; Artemis was especially fine. Mr. E. Charrington, Mayfield, with very bright flowers, followed second; and third, out of seven, came Mr. R. C. Cartwright.

For six white ground Picotees, Mr. Spencer was first with good flowers, and was closely followed by Mr. R. C. Cartwright; and third, Mr. Jas. Fairlie. The best varieties were Little Phil, Lavinia, Ganymede, Amy Robsart, Favourite, and Miriam. Mr. Spencer beat Mr. E. Charrington, and third Mr. Cartwright, in Class 29, for six Picotees, yellow ground, the best being Lady St. Oswald, Lady Bristol, and Eldorado. Nine entrants contested Class 30 for three selfs, the award being again captured by Mr. Spencer, with smooth and good blooms of Mrs. Eric Hambro; second, Dr. Moore Binns, Merriman's Hill, Worcester, with the same variety; and third, Mr. Cartwright, with Dick Donovan, another pearly white. Seven came forward with three buff or yellow ground Carnations each, and Mr. Spencer had the best, staging Eldorado; second, Mr. C. A. Philbrick, Erleigh Road, Reading, with Artemis; and third, Mr. R. C. Cartwright, with Voltaire.

For three Fancies, yellow or buff ground, Mr. E. Charrington,

Mayfield, with Mrs. Siebright, came first; second, Mr. Spencer, with Artemis; and third, Mr. R. C. Cartwright, with the same. Three yellow ground Picotees, in Class 33, resulted in first for Mr. Spencer, second for Mr. Charrington, and third for Mrs. Brookes-Smith, Olrig House, St. Mary's Church, Devon. In Class 34, for selfs and Fancies, three varieties, in vases, Mr. Cartwright was first; Mr. Spencer, second; and Mr. Fairlie, third.

In Class 35, for six bizarres and flakes, Mrs. W. V. Charrington, Hever, Edenbridge, occupied the premier place, staged Phoebe, Master Fred, Guardsman, J. S. Hedderley, and R. Houtgrave, with a good seedling to make the number; second, E. H. Buckland, Esq., Winchester; and third, E. J. Wootton, Esq., Winchester. Class 36, for six selfs, which was well contested, Mrs. Eleanor Best, Abbott's Ann, Andover, taking the first prize. The lady's blooms were Lady Hermione, Cecilia, Waterwick, Dick Donovan, Hayes' Scarlet, and Miss A. Campbell, a very nice lot of well formed and well coloured flowers; second, C. L. Gordes, Esq., Sydney Park, Walton-on-Thames; and third, E. J. Wootton, Esq., Winchester. For six Fancies in Class 37, E. J. Wootton, Esq., was first; staged fine blooms of Duchess of Roxburgh, Eldorado, Argosy, Persimmon, and Galileo; second, Mrs. M. V. Charrington, Hever, Edenbridge; and third, E. H. Buckland, Esq., Winchester.

Class 38, for six Picotees, with white ground, had seven entries; and C. L. Gordes, Esq., Walton-on-Thames, was first, having on his stand Lavinia, Fanny Sell, Mrs. Gorton, Grace Darling, Amy Robsart, and Sommerhill; second, E. J. Wootton, Esq., Winchester; and third, Mr. M. V. Charrington. In Class 39, for six yellow ground Picotees, the first place was taken by C. L. Gordes, Esq., the varieties staged being Mrs. R. Sydenham, Lauzan, Evelyn, Child Harold, Carrain, and Lady St. Oswald.

In Class 40, for six Carnations and Picotee blooms, dissimilar, Messrs. Blackmore and Langdon, Twerton-on-Avon, Bath, took the honour with Cecilia, Alice Brown, Blanche, Snowball, Mrs. Wall, and Nellie Eskins; second, L. A. Neave, Esq., Ingatestone; and third, W. Moore Burns, Esq., Worcester. In Class 44, for twelve specimens in pots, not exceeding 8½ diam., Martin R. Smith, Esq., Hayes, was first with good specimens of Sir John Ramsden, Author, Agnes Sorrel, and Lady Hillington; Mr. Charles Turner Slough was in the second place with much dwarfier stuff.

In Class 46, for group of Carnations plants, area 50 sq. ft., Martin R. Smith, Esq., Hayes (grower, Mr. C. Blick), was to the fore. The group was tastefully arranged with the aid of Bamboos, Palms, and Adiantum cuneatum. The varieties attracting most attention were Firebrand, Bridegroom, Mrs. Charles Barry, Reade, Infanta, Moll Flanders, and many other fine flowers were included. Mr. Chas. Turner, Slough, was second with a small group of Tree Carnations.

For two cut blooms (seedlings), in Class 41, the first prize went to H. S. Bartlett, Esq., Shooter's Hill, for Mr. A. Roland Bartlett, a deep crimson border Carnation. A. F. Fitter, Esq., 15, Streatham Hill, S.W., was second in Class 47 for a group of Carnations. No first prize awarded.

In Class 49, for a vase of Carnations or Picotees, or together, E. J. Wootton, Esq., Winchester, was first with an epergne prettily arranged with pale yellow Carnations and grasses, with Adiantum cuneatum; second, W. Spencer, Esq., Windsor; third, Mrs. J. W. Euston, Chadwell Heath, Essex. In Class 50, for three sprays, Mrs. Hadley, Parkside, Reigate, was first with three charming sprays, arranged with Asparagus plumosus, great taste was evidenced in choice of specimens; second, E. J. Wootton, Esq., Winchester; third, W. Spencer, Esq., Windsor.

Class 51, for six buttonholes, P. C. Cartwright, Esq., King's Norton, Worcestershire, was first with six well arranged buttonholes, with own foliage and Adiantum cuneatum; second, Mrs. M. V. Charrington, Hever, Edenbridge; third, W. Spencer, Esq., Windsor.

#### Premier Blooms.

Best bizarre, Master Fred, from Mr. F. Wellesley; flake, Sportsman, from Mr. Pemberton; self, Mrs. G. Siebright, from Mr. E. Charrington; Fancy, Queen Bess, from Mr. W. Spencer; white ground, heavy edged Picotee, Mrs. Foster, from Mr. R. Sydenham; ditto, light edge, Fortrose, from Mr. F. Wellesley; heavy edged, yellow ground, Dalkeith, from Mr. M. Smith; light edge, yellow ground, Mrs. W. Heriot, from Mr. M. Smith.

#### Miscellaneous.

Mr. James Douglas, Edenside, Great Bookham, Surrey, contributed a group of his seedling Carnations, with others that are now most popular. Amongst yellow ground Fancy Carnations we noted Argosy, Daniel Defoe, Mrs. Tremayne, Lady Bristol, Gronow, Amphion, Evangeline, and Nelly Ryan, a purple flaked sort of good appearance. Agnes Sorrel, dark red self; Clio, Salomea, Boreas, Sappho, Elfin, Pagan, and Sir J. Falstaff were others noted.

### Hereford and West of England.

The thirty-sixth exhibition of this society, the oldest it may proudly be claimed, the parent of all existing Rose shows, was held in the Shire Hall, Hereford, last Wednesday, July 16, with a success far superior to any that have taken place of late years. This happy result mainly followed from the leading professionals—Messrs. A. Dickson and Sons, Belfast and Ledbury; B. Cant, F. Cant and Co., Prior and Sons, Colchester; J. Townsend, Worcester; G. Prince, Berks; J. Mattock, Oxford, and King's Acre Nurseries, Hereford—and amateurs, Rev. G. H. Pemberton, Essex; Rev. F. R. Burnside, Essex; Rev. F. G. Fulford, Haxley; Rev. R. Powley, Upton Seadamore; Messrs. Conway Jones, Gloucester; Mr. R. Foley Hobbs, Worcester, putting in an appearance, as this year, owing to the late fixture of the show, such distant exhibitors were set free from their engagements at more comestable and commercial centres.

The day being brilliantly fine, the attendance was unusually good, and everything couleur de Rose, floriculturally and financially. Owing to the late, cold, dragging spring, Roses, as may be supposed, were not uniformly good. Indeed it may be said that in point of condition, the blooms were either

lacked freshness and smoothness Messrs. Dicksons' seventy-two was a notable exception, of which we append a list.

Division I. (Nurserymen).—First prize, Messrs. Dickson and Sons. Back row: Madame C. Testout, Helen Keller, Marie Bannmann, Gladys Harkness, A. Colomb, Madame E. Verdier, M. Rady, Robert Scott, Marchioness Dufferin, Lady Clamorris, Duke of Fife, Duchess of Portland, Thomas Mills, Florence Pemberton, Mamie, Bessie Brown, Tom Wood, Lady M. Fitzwilliam, Ulrich Brunner, Mildred Grant, Gustave Piganeau, Lady Myra Beauclerc, Comtesse de Ludre, Her Majesty. Middle row: A. K. Williams, Edith D'Ombraïn, Shandon, Innocente Pirola, John Ruskin, Pierre Notting, Lady Ashtown, François Michelin, Alice Lindsell, La France, Mrs. R. G. Sharman Crawford, Duchess of Bedford, Maman Cochet, H. Vernet, Hon. E. Gifford, J. S. Mill, White Maman Cochet, Danmark, Mrs. John Laing, Earl Dufferin, Muriel Grahame, Suzanne M. Rhodocnachi, Jean Ducher, Margaret Dickson. Front row: M. C. Ramey, Marquis Litta, a new seedling, François Gurtin, Mrs. E. Mawley, K. A. Victoria, Madame Luizet, Comtesse de Nadaillac, Victor Hugo, Souvenir de S. A. Prince, Madame Cusin, Queen Alexandra, Berthe Giemen, Medea, Prosper Langier, White Lady, Souvenir d'un Ami, Golden Gate, Etoile de Lyon, Comtesse

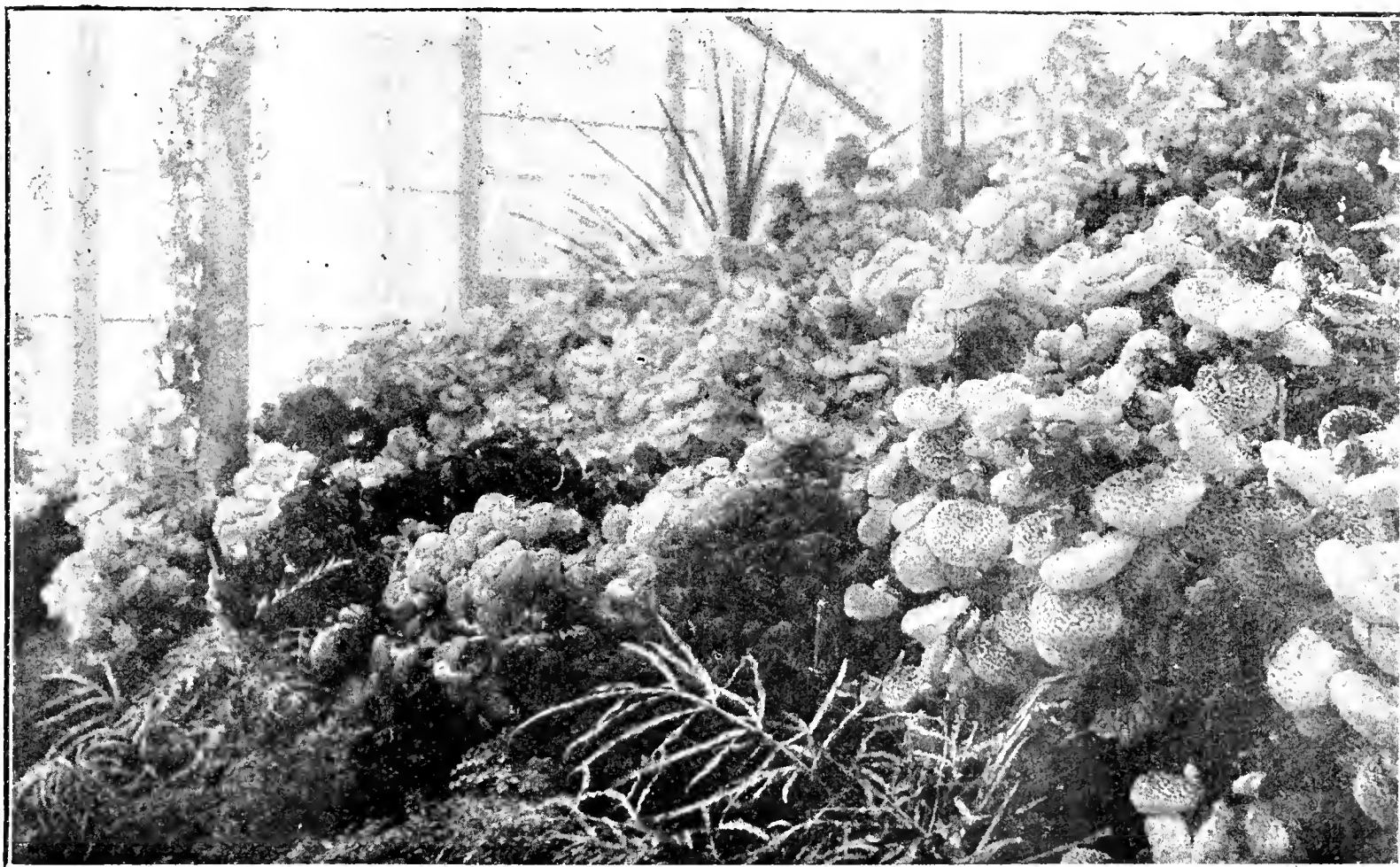


Photo by

H. F. Taylor, Liverpool

A Good Strain of Herbaceous Calceolarias. (See page 78.)

exceptionally good or exceptionally bad; while owing to the scorching day previously, many exhibits held out signals of distress from their long journey. Many varieties, notably among the new and lately introduced into commerce, have well sustained their reputation, while others, especially among Messrs. A. Dicksons' H.T.'s have already made their mark. The praise of their Mildred Grant was, of course in everybody's mouth; while H.P. Ben Cant is undeniably a splendid addition, in point of colour, substance, and robust habit, to the not too large proportion we have among the dark varieties. Another H.P., Frau Karl Druschki (Lambert), struck us more than any other Rose in the show. It was shown superbly as a treble in one of Messrs. Dicksons' stands, and will undoubtedly become more and more popular as it is better known, not only from its size, substance, and high centre, but from its exquisite colour, being snow white, differing from most of its class, in which lemon, blue, or other neutral tints are observable. Medea, Tea, was shown grandly by Messrs. Dickson and elsewhere, and should be in every collection. Among other Roses "whose year it is," and which were remarkably well shown, and in several exhibits, were Horace Vernet and Earl of Dufferin among Dark Roses (and here, *en passant*, H.P. Bacchus, may be strongly recommended as a most reliable dark variety but seldom exhibited). Maman Cochet, Tea, was shown everywhere splendidly, and its sport, White Maman Cochet, equally good and perfectly distinct. While several of the exhibits

Serenye, Beauty of Waltham, Marchioness of Londonderry, Mrs. Bateman, François Louvat. Second prize, Messrs. D. Prior and Sons; third prize, Messrs. B. R. Cant and Co.

Messrs. A. Dickson also carried off the following:—First prize, Class 3, for trebles; first prize Class 4, and for eighteen Teas or Noisettes with Maman Cochet, Souvenir de S. A. Prince, Mrs. Edward Mawley, White Maman Cochet, C. Mermet, Etienne de Lyon, Madame Wagram, Comtesse de Turenne, Bridesmaid, Golden Gate, Souvenir d'un Ami, Hon. E. Gifford, Jean Ducher, Madame Cusin, Innocente Pirola, Princess of Wales, Medea, Comtesse Nadaillac, Madame de Watteville.

Also first prize, Class 17, twelve of any one light Rose with H.T. Mildred Grant. First prize, Class 19, any one yellow Rose with Tea Medea.

First prize Class 18, with any one dark Rose, fell to Messrs. Prior and Son with Horace Vernet, and for any one white Rose to Rev. F. R. Burnside, with White Maman Cochet. This was indeed a grand collection, keenly competed for and fairly won in an open class by an amateur.

In the amateur division the first prize—Class 5, twenty-four varieties—was carried off by the Rev. G. H. Pemberton, with a fine, well staged but somewhat travel worn collection, of which the following is a list:—Charles Lefebvre, Caroline Testout, Général Jacqueminot, Ulrich Brunner, Marie Baumann, Her Majesty, Comte Raimbaud,



Suzanne M. Rhodocanachi, François Michelon, H. Vernet, Bessie Brown, Madame Hausman, Mrs. John Laing, Beauty of Waltham, K. A. Victoria, A. K. Williams, Comtesse de Ludre, Jeannie Dickson, Marie Rady, Danmark, Comtesse de Paris, Tennyson, Victor Hugo, Madame C. Crapelet. After the Rev. J. H. Pemberton came Mr. Conway Jones with second prize, and behind him in third place Mr. M. Whittle.

Following on the above commentary we append the awards in the most important classes:—

**NURSEYRMEN.**—Class 1, seventy-two varieties: First, Messrs. A. Dickson and Sons, Belfast and Ledbury; second, Messrs. D. Prior and Son, Colchester; third, Mr. B. Cant, Colchester. Class 2, thirty-six varieties: First, Messrs. J. Townsend and Sons, Worcester; second, Mr. John Mattock, New Headington, Oxon; third, Mr. G. Preece, Longworth, Berks. Class 3, twenty-four varieties, three of each: First, Messrs. A. Dickson and Sons; second, Mr. B. Cant; third, Messrs. Prior and Son. Class 4, twelve varieties, Hybrid Teas: First, Messrs. A. Dickson and Sons; second, Messrs. Prior and Son; third, Mr. John Mattock.

**AMATEURS.**—Class 5, twenty-four varieties: First, Rev. J. H. Pemberton, Havering, Essex; second, Mr. Conway Jones, Hucclecote, Gloucester; third, Mr. M. Whittle, Leicester. Class 6, eighteen varieties: First Mr. R. Foley Hobbs, Thornoloe, Worcester; second, Rev. J. G. Fulford, Flaxley, Gloucester; third, Rev. R. Powley, Upton Scudamore. Class 7, twelve varieties, three of each: First Mr. Conway Jones; second, Rev. J. H. Pemberton; third, Mr. R. Foley Hobbs. Class 8, six varieties, Hybrid Teas: First, Mr. R. Foley Hobbs; second, Rev. Preb. G. E. Ashley, Stretton Rectory; third, Mr. Conway Jones.

**HEREFORDSHIRE AMATEURS.**—Class 9, eighteen varieties: First and gilt medal, Rev. G. E. Ashley; second, Mr. E. W. Caddick, Caradoc, Ross. Class 10, twelve varieties: First Mr. H. Stanton, Tyberton Court, Hereford; second, Mr. W. E. King King, Bodenham Manor, Leominster; third, Mr. T. Llanwarne, Hillside, Hereford. Class 11, six varieties, three of each: First, Rev. Preb. G. E. Ashley; second, Mr. W. E. King King. Class 12, twelve distinct Roses, one truss each (exhibition or garden), stems to be the natural growth, not disbudded, of characteristic habit (given by Mr. J. H. Arkwright): First, Rev. Preb. G. E. Ashley; second, Mr. J. H. Arkwright; third, Mr. A. W. Foster, Brockhampton Court.

**TEA AND NOISETTE DIVISION.**—**NURSEYRMEN.**—Class 13, eighteen Teas or Noisettes, distinct: First, Messrs. A. Dickson and Sons; second, Mr. G. Prince; third, Messrs. Prior and Sons. Class 14, twelve Teas or Noisettes, distinct: First Mr. John Mattock; second, Messrs. J. H. Townshend; third, Mr. W. T. Mattock.

**AMATEURS.**—Class 15, twelve Teas or Noisettes, distinct: First, Mr. Conway Jones; second, Rev. F. R. Burnside, Great Stambidge, Essex; third, Rev. R. Powley, Upton Scudamore. Class 16, six Teas or Noisettes, distinct: First, Mr. H. Stanton; second, Mr. C. Holbrook, Hucclecote House; third, Mr. R. Foley Hobbs.

**OPEN CLASSES.**—Class 17, twelve, one sort of any light Rose (H.P.): First, Messrs. A. Dickson and Sons; second, Mr. B. Cant. Class 18, twelve, one sort of dark Rose (H.P.): First, Messrs. Prior and Son; second, Mr. B. Cant. Class 19, twelve, one sort of any yellow Rose: First, Messrs. A. Dickson and Sons; second, Mr. G. Prince. Class 20, twelve, one sort of any white Rose: First, Rev. F. R. Burnside; second, Messrs. Prior and Son.

The hardy perennials were a very conspicuous feature in the show. There was a large number of entries for the open class of thirty-six bunches, Mr. W. T. Mattock, Headington, Oxford, taking first prize for a varied and admirably grouped collection. In the amateur class of twenty-four bunches the first prize fell to the Rev. Sir George Cornwall, Moccas Court, Herefordshire, with a nice collection, in which were some rare and interesting specimens. The decorative division was hardly up to the mark, the dinner decorations especially lacking in design, or rather absence of design and originality, but where ladies are the competitors all criticise stops. It only remains to add that the judges in the nurserymen classes were the Rev. C. H. Bulmer, Mr. Conway Jones, and Mr. John Cranston. In the amateur classes Mr. W. Dickson, Mr. W. Drews, and Mr. W. Prior.

In our generation the Rose show, *pur et simple*, was in vogue. The public went or stayed away, but they got nothing more for their money. Things are strangely altered nowadays. Every undertaking, on both sides of the Atlantic, is worked on the broad lines of a "combine" (a new word, taken on wonderfully). It matters not whether on the enormous scale of ocean traders or the retail store of inland traders, the principle is the same. It is the active spirit of this restless age. Nothing singular has happened. We must move with the times, and the people love to have it so.

The custom has prevailed for several years at the Hereford Rose Show, and—all praise be given the marvellous versatility and resourcefulness of the energetic hon. secretary—has proved a great success; most advantageous to the society's exchequer, and with a minimum of outrage to the feelings of veterans like your reporter. Certes! No subsidiary element of amusement could

be introduced better than those at present adopted: Theatricals, admirably acted, unobtrusively located, and not obligatory to the enthusiast, on whom a feast of Roses, from the first to the last course, as so many dainties, never palls.—**HEREFORDSHIRE INCUMBENT.**

### National Rose, Manchester, July 19th.

Manchester has always boasted of its annual Rose show which is held at the Botanical Gardens, Old Trafford, and it seems almost incredible that so splendid a position in which to hold a show where the queen of flowers can be seen in every phase of its beauty, should have been without a visit from the National Rose Society for so long a period as seventeen years. Yet such is the case, but if one must judge by the huge attendance and the enthusiastic interest manifested by the public, committee, and exhibitors on Saturday last, there is no reason to suppose another visit will not shortly be made.

Unlike the Whit Show, the exhibition house was not requisitioned, the annexe with its ample promenade space, the roof of which is beautifully clothed with creepers, was used instead, with the result that a more effective scene of floral beauty as viewed from the end steps could not well be conceived. There one could see the long rows of cut flowers superbly staged so as not to break the view afforded by the charming display of garden Roses far away in the distance. Mr. P. Weathers, the popular curator, and his able assistant, Mr. Paul, acting in conjunction with Mr. Edward Mawley, who came down the previous evening, are to be highly complimented in dealing with so large a number of blooms. The luncheon was presided over by Alderman Hay, Lord Mayor of Manchester, who gave the members present a most hearty welcome. He congratulated all on the excellence of the show, and hoped that another visit would shortly be made. Mr. Edward Mawley, Mr. James Brown, and Alderman Gibson briefly addressed those present.

Speaking strictly now of the exhibits, it must be confessed that considering the unusual season through which we have been passing, the quality and number of blooms must have come almost as a revelation to many present, for not only were they of fine formation, but the colour in most instances was exceedingly good.

In the nurserymen's section the chief prize was for the Jubilee trophy and gold medal, a most spirited competition ensuing for this extra class of thirty-six distinct varieties. The honour fell to Messrs. Harkness of Hitchin, with a smart set of blooms, the following being the list:—Her Majesty, Fisher Holmes, Maman Cochet, François Michelon, Madame Eugène Verdier, Ulrich Brunner, Duchesse de Morny, Muriel Grahame, Exposition de Brie, Comtesse de Nadaillac, Earl of Dufferin, Madame Joseph Bonnaire, Kaiserin A. Victoria, Mrs. W. J. Grant, Maréchal Niel, Camille Bernardin, Mrs. Mawley, Madame Delville, Gustave Piganeau, Mildred Grant, Bartholomy Joubert, Ulster, Chas. Darwin, Bessie Brown, Mrs. J. Laing, Horace Vernet, White Maman Cochet, Xavier Olibo, Souvenir d'Elise, Marie Baumann, Suzanne Marie Rhodocanachi, Alfred Colomb, Medea, Killarney, and Mrs. Cocker. The second stand was from Messrs. R. B. Cant and Co., Colchester, and the third from Messrs. Alex. Dickson and Sons, Newtownards, Co. Down. This was a class in which brilliant form came much to the front.

Mr. Hugh Dickson came well to the front for thirty-six distinct, having Mrs. J. Laing, Captain Hayward, Gladys Harkness, Comtesse de Ludre, Helen Keller, Alan Cheales, La France, J. S. Mills, Mrs. Sharman Crawford, Etienne Levat, Gustave Piganeau, Bessie Brown, Marquis Litta, Heinrich Schultheis, and Baroness Rothschild; Messrs. Jno. Townshend, Worcester, were second, and Messrs. W. H. Frettingham, third.

The class for sixty distinct was a great contribution to the show; Mr. B. R. Cant scoring with a rich stand of the following varieties: Earl of Dufferin, Marchioness of Londonderry, Le Havre, Caroline Testout, Charles Lefebvre, Papa Lombard, Gustave Piganeau, Eugène Verdier, Countess of Oxford, Countess of Rosebery, Marie Rady, Madame J. Bonnaire, Dupuy Janin, Bessie Brown, Ulrich Brunner, Helen Keller, Bernard Andre, Countess of Caledon, Paul Neron, Mrs. Jno. Laing, Comtesse de Nadaillac, Muriel Grahame, Ben Cant, Ulster, King Cole (a fine dark seedling), Golden Gate, François Michelon, Mrs. Cocker, Comtesse de Ludre, Maman Cochet (two varieties), Jean Scupert, Frau Karl Druschki (a lovely white), Alfred Colomb, The Bride, Duke of Teck, Kaiserin A. Victoria, Tom Wood, Lady M. Fitzwilliam, Reynolds Hele, Marie Verdier, Madame Hausman, Merveille de Lye, Camille Bernardin, Bridesmaid, Beauty of Waltham, Souvenir de S. A. Prince, Mrs. Sharman Crawford, Maurice Bernardin, Medea, A. K. Williams, Madame Cadeau Rainy, Mrs. Mawley, S. M. Rhodocanachi, Comtesse de Nadaillac, Charles Darwin, Clio, Mrs. J. Laing, Pierre Notting, and Duchesse de Morny. In Messrs. A. Dickson's capital second stand there were exceptionally fine blooms of Caroline Testout,

Muriel Grahame, Mrs. R. G. S. Crawford, Florence Pemberton, Lady Clanmorris, Mrs. W. J. Grant, Margaret Dickson, and Mrs. Sandford.

The class for twenty-four trebles saw Mr. Harkness and Messrs. Alex. Dickson and Sons in very close proximity, the final decision going to the former for what appeared to onlookers to be the heavier stand, and one which gave the judges some trouble. The first was as follows:—Pride of Waltham, Fisher Holmes, Bessie Brown, Helen Keller, Earl of Dufferin, Mrs. W. J. Grant, Alfred Colomb, Maréchal Niel, Mildred Grant, Madame E. Verdier, Mrs. Mawley, François Michelin, Marquise Litta, Killarney, Exposition de Brie, Lady Clanmorris, Her Majesty, Ulrich Brunner, Caroline Testout, Gustave Piganeau, La France '89, Kaiserin A. Victoria, Louis Van Houtte, Mrs. John Laing. Messrs. Alex. Dickson had of their best Mildred Grant, Florence Pemberton, Ulrich Brunner, Caroline Testout, Earl of Dufferin, and Helen Keller. The third prize fell to B. R. Cant and Co., Colchester.

Mr. Hugh Dickson secured the prize for sixteen trebles, which were good in every way; Mrs. J. Laing, Comtesse de Ludre, Alan Cheales, Mrs. Sharman Crawford, Marquise Litta, and Oliver Corail being most conspicuous. Mr. J. Mattock was second with much smaller flowers, and Mr. W. H. Frettingham, Notts, third.

For twelve Teas or Noisettes, distinct, Messrs. Alex. Dickson and Sons had a splendid box; Duchess of Portland, Catherine Mermet, Maman Cochet, Kaiserin Auguste Victoria, Meta, Madame Cusin, and Comtesse de Nadaillac showing to great advantage.

The gold medal for any new Rose went to Messrs. Alex. Dickson and Sons for Florence Pemberton, a fine grower and rich shade of pink. The medals went to Messrs. Townshend for Mrs. Jno. Laing; F. Cant and Co. for Mildred Grant; and Messrs. D. Prior and Sons for Maman Cochet.

For twelve of any white or yellow Rose, Mr. Frank Cant, Colchester, won with Bessie Brown. Mr. Geo. Prince, Oxford, second with White Maman Cochet, and Mr. Prior with the same variety. A lovely box of Mildred Grant secured the light pink or rose-coloured class for Messrs. Alex. Dickson and Sons, who also had the distinction of winning the class for new Roses.

A beautiful feature of the show was the class for exhibition Roses in vases to be equally distributed round the vases so as not to face one way only, to consist of not more than seven blooms of each in twelve varieties and not more than six varieties of Teas and Noisettes, and not to exceed a space of 6ft. by 4ft. Handsome they were, Mr. G. Prince placing on the table for first prize Marie Van Houtte, Reynolds Hole, Bessie Brown, Mr. W. J. Grant, and C. Mermet being most convincing. Mr. J. Mattock was a grand second.

If the larger type of Roses found their friends, so too did the exhibition of garden Roses which were simply exquisite in form and arrangement, and much in advance of anything seen in Manchester. Mr. Jno. Mattock here scored a most decisive victory, the effect in colour combined with a most natural idea in setting up, making a perfect study. Not quite so artistically done was the second prize lot staged by Mr. Frank Cant, who is heartily to be congratulated. Mr. Geo. Prince was a splendid third. In this section were noticed especially fine Cecile Brunner, Marjorie, Hebe's Lip, Killarney, Meta, Papillon, Souvenir de C. Guillot, and Camoens.

#### Amateurs' Section.

The exhibitors in this section in several instances surpassed that of the open, and more particularly does this apply to those staged by Messrs. E. B. Lindsell, R. Foley Hobbs, H. V. Machin, and the Rev. J. H. Pemberton, who were all in great form. The Jubilee trophy and gold medal was the special object over which the honours of the day centred, and bravely was the battle waged, the victor undoubtedly being Mr. E. B. Lindsell, of Hitchin, who contributed an almost faultless twenty-four distinct, of which Maman Cochet, Horace Vernet, Ulrich Brunner, Bessie Brown, Mrs. J. Laing, and La France gave the best account. Mr. H. Machin, Workson, was a capital second with extra Mrs. Sharman Crawford, Mrs. J. Laing, and Bessie Brown. Rev. J. H. Pemberton came a good third.

Mr. E. B. Lindsell again came forward for thirty-six distinct, the Rev. J. H. Pemberton keeping him very hardly pressed, with Mr. R. Park, Bedale, third. In the very large number of classes in this section the palm must be given to Messrs. Lindsell, Foley Hobbs, H. V. Machin, C. Burgess, R. Park Curtis, the Rev. J. H. Pemberton, F. C. Burnside, and F. Langtree. The N.R.S. medals went to the Rev. R. Langtree for Prince Arthur; the Rev. F. C. Burnside for Maman Cochet; and Mr. Foley Hobbs for Mildred Grant.

Sweet Peas came from Mr. H. Eckford and Messrs. Jones, of Shrewsbury, and Hinton, of Warwick, whilst a splendid stand of herbaceous plants were staged by Messrs. Dickson and Robinson of Manchester, and Mr. E. Mawley won for garden Roses.—R. P. R.

#### Diss, July 15th.

St. Swithin's was cloudless and very hot, and nothing but strong young Roses could stand long in the tent at this little show. In the open Class, 36, Messrs. B. R. Cant and Sons were easily first, having fine specimens of Mildred Grant, Horace Vernet, Duke of Edinburgh, Mrs. E. Mawley, Comte de Rainbaud, and Ulster. As to this latter Rose, your reporter of the Southend Show must have made some mistake in saying that "Ulster runs Mrs. W. J. Grant very close in colour and general character, &c." They are certainly very different indeed in colour; and in shape and general character I really think there are few Roses more widely apart. Messrs. F. Cant and Co. were second, showing White Maman Cochet, Waltham Standard, Gladys Harkness, and Victor Hugo well. Rev. A. Foster-Melliar third, with a good Duchesse de Morny. For the principal amateurs' class, twenty-four Roses, in the absence once again of Mr. Orpen, to contend for the Free Memorial Challenge Cup, Mr. Foster-Melliar retained possession of it with a good stand. A large, quite perfect and clean White Maman Cochet (best Tea) was his finest bloom, and Mrs. J. Laing (best H.P.), François Michelin, Maman Cochet, Maréchal Niel, and Comtesse de Nadaillac were also good. Rev. J. A. Fellowes, of Bunwell Rectory, Attleborough, followed, some twenty-four points behind, with a fair Maman Cochet. The third prize card seemed to have gone astray. For twelve Teas (open), Messrs. B. Cant and Sons led, followed by Messrs. F. Cant and Co. Mr. Fellowes was third with nice young buds, and Mr. Foster-Melliar was awarded an extra prize (which his stand hardly deserved) for what would have been fine Teas but for the rain of the week before. Roses in the local classes, as usual, soon presented a sorry spectacle under the influence of the heat. Mr. Fellowes brought his Roses on his motor-car—a new departure, but perhaps a useful one for those far from a station.—W. R. RAILLEM.

#### Formby, July 16th.

It was most fortunate for the committee of this popular society that the show was postponed for a week, otherwise the Roses would not have been so perfect, and worse still, a wet day would have had to be recorded. Instead, the day was one of brilliant sunshine, and many of the most notable families were present. The entries were larger than usual, most noticeable improvement being in the greenhouse flowering plants and table decorations. To show the interest taken to encourage horticulture, one may incidentally mention that no fewer than twelve silver cups are given, of the value of from two guineas to five guineas each. The Rose classes were admirably filled, and occupied almost one side of the large tent.

For twelve distinct Mr. B. Kennedy, the best known of our local growers, carried off the award with splendid Mrs. W. J. Grant, Helen Keller, La France, Captain Hayward, Madame Cusin, Madame Cochet, Prince Arthur, Comte de Rainbaud, Victor Hugo, Suzanne Marie Rhodocanachi, and White Maman Cochet. The Rev. J. B. Richardson ran a good second with Prince Arthur, fine. For twelve Teas or Noisettes Mr. Kennedy won with Mrs. W. J. Grant, La France, and Emilie Genin, extra good. Mr. C. Hacking second. Miss M. A. Rimmer had Clara Watson, Mrs. J. Laing, S. M. Rhodocanachi, La France, Marie Baumann, and Ulrich Brunner, an excellent six distinct.

For six light Roses Mr. Luther Watts had Mrs. S. Crawford, Mrs. Mawley, and C. Testout, and for darks Miss M. A. Rimmer with Marie Baumann, Prince Arthur, and A. Colomb. Mr. L. Watts secured the prizes for two other classes. The N.R.S. medal for the best bloom in the show went to Mr. T. Carlyle for Mrs. R. G. Sharman Crawford.

The classes for those growing less than 200 plants were taken by Messrs. E. Sergeantson and T. Pugh, the former gentleman winning the N.R.S. bronze medal for the best bloom in this section.

Sweet Peas were represented by thirteen twelve, but they were not of last year's quality, no doubt owing to the severe weather. The cup presented by Mr. H. Middlehurst was finally won outright by Mr. W. Dodd, junr., an amateur who deserves very great credit. A capital second was found in Mr. J. H. Page. The varieties Black Knight, Blanche Burpee, Prima Donna, Salopian, Lady Mary Currie, Prince of Wales, Duke of Westminster, Hon. Mrs. Kenyon, Gorgeons, Lottie Hutchins, Emily Eckford, and Countess of Lathom.

The table decorations were exceedingly handsome, Miss M. A. Rimmer having Iceland Poppies, grasses, and Gypsophila for first. The second was a grand treatment of Syringa, Maidenhair Fern, and Smilax, with touches of Lily of the Valley. Miss Rimmer also won with a large well-arranged basket of Roses with Prunus foliage. Mr. Luther Watts had splendid Glorinas and Tuberous Begonias, double and single. Some grand Petunias came from Mrs. Rathbone, and excellent Ferns and greenhouse plants from Messrs. F. A. Rockliff and Jonathan Formby.

Fruit and vegetables were of more than the usual merit.



tho classes being so numerous as to make it an impossibility to include names. Messrs. Alex. Dickson and Sons, Newtownards, showed magnificent Roses and Sweet Peas. Amongst the former was a new seedling, Queen Alexandra, a fine well-built bloom, beautifully pointed and of a charming shade of flesh. The Sweet Peas, as with the Roses, were marked by the highest of quality and colour. A first prize and an award of merit was quickly granted.

Fifty varieties of Sweet Peas were superbly set up by Mr. Henry Eckford. They were clean and in all the newer varieties. Mr. Henry Middlehurst also set up a large and effective display, each being granted an award of merit. It only remains to be said that finances are right, and with Mr. Kennedy as chairman, Mr. E. H. Bushell as treasurer, and the stirring secretary Mr. T. Pugh, the society is bound to flourish. —R. P. R.

### Edinburgh Summer Show.

A very successful and enjoyable exhibition, promoted by the two Scottish metropolitan societies, the Royal Caledonian and the Scottish Horticultural Association, was held in the Music Hall, Edinburgh on the afternoon and evening of the 16th inst., when the display, considering the untoward nature of the present Scottish summer, quite surpassed expectations both in quantity and quality. A Rose show used to be a part of the regular programme of the Royal Caledonian, and many successful exhibitions were held in the Music Hall in olden times, and afterwards in the Waverley Market. The expenses attendant on exhibitions in the Waverley Market are great, and the public are "dread" to draw to any building on a warm summer's day, so that constant large deficits so emasculated the courage of the Royal committee that the exhibitions were discontinued. Some years afterwards Mr. M. Todd, when president of the association, resuscitated these exhibitions on a small scale, and for several years they have been held in various places in the city, and as educative and interesting meetings have proved most successful. A happy idea, on this the Coronation year, brought the two societies together, and the present first combined effort we hope is the first of many joint efforts to promote horticulture, and to show how becoming well is it for such as are brethren to dwell in unity, or at least in close amity.

The present exhibition was not in the ordinary sense a competitive one. There was no prize list: but growers were invited to contribute whatever was thought by them to be of interest. The gardeners and nurserymen responded liberally when the season is taken into account, but what was hoped would be the leading feature, viz., Roses and Strawberries, were somewhat scanty. The deficiency in Roses was nobly made up by the splendid exhibit of Mr. Hugh Dickson, the veteran of Belfast. We have seen Mr. Dickson's Roses, we think, every year since he first brought Ireland into notice as a worthy source of the great emblematic flower of England, and we think he never staged a finer lot of blooms than on the present occasion. He had some twenty stands filled with blooms of delightful freshness, brilliant colours, and admirable size and substance. To name the varieties would only weary the reader, as our pages at present are filled with repetitions of the same leading sorts at every exhibition. Captain Hayward, that delightful free-blooming variety, was greatly in evidence, and proves that in good or bad seasons he is always to be relied upon. Among Pinks, Mrs. Sharman Crawford held a conspicuous place, while Marquis Litta was also prominent. One or two for size were too utterly too-too. The Rev. Alan Cheales is too huge, and it will be a pity when the Rose emulates in size the exhibition Japanese "Mum." Novelties were not wanting, and two of Mr. Dickson's own children received certificates. One, Hugh Dickson, a noble crimson of good size, great substance, and brilliancy of colour, yet perfectly distinct in shade, well deserved the "first class" awarded. The other, Dorothy, a chaste, light blush flower, is also promising. A gold medal award unanimously given by the judges was richly deserved. Messrs. Croll, of Dundee, had also a handsome exhibit of show and garden Roses, but, while not wanting in quality, showed that their time this season has not yet come; a silver medal was awarded them.

Hardy border flowers were well represented, specially so by Messrs. Cunningham and Fraser, who filled a large stage arranged with a magnificent collection rich in Peonies and Iris, but with many rarer sorts in choice condition. This was awarded a gold medal. Messrs. Dicksons and Co. had also a beautiful table of Streptocarpus, Pelargoniums, Lobelias, Water Lilies, &c.—the last-named, in basins of water, were specially beautiful. Messrs. Storrie and Storrie, of Dundee, had a very varied exhibit of single Begonias (very beautiful, but just large to a fault), Streptocarpus, Sweet Peas, Lobelias, &c. This was, perhaps, the most tastefully arranged exhibit in the hall, and reflected great credit on Mr. Storrie; a large silver medal was awarded. Messrs. Laing and Mather, the King's seed-men, of Kelso, were strongly in evidence with their great speciality, the Malmaison, of the various varieties of which they exhibited most capitally grown specimens. They had also blooms of the sensational American

variety, Mrs. T. W. Lawson, which, though beautiful, was hardly worth the trumpet-blowing it received; a silver medal was awarded this collection. Mr. Eckford kindly sent a large variety of the best sorts of Sweet Peas, though this season has not produced them quite up to Mr. Eckford's usual form; yet they were a most attractive collection.

Other trade exhibitors were Messrs. Campbell and Sons, Blantyre (beautiful lot of Carnations); Messrs. Kelway, Langport, (a choice exhibit of Gaillardias and other showy hardy flowers); Mr. Lornie, Broxburn (Iris, summer Chrysanthemums, &c.); Mr. John Downie, who exhibited an interesting table of plants. Messrs. Laird and Sons filled the orchestra with a very beautiful lot of plants, which added much to the appearance of the hall. The arrangement of this exhibit was most commendable, and reflected great credit on the artistic capacity of the firm; a large silver medal was awarded. One of the most charming exhibits in the hall was by Messrs. Todd and Co., art florists, who, to quote from the "Scotsman," were "as usual, to the front with a really exquisite table of bouquets, baskets of Roses, vases of Sweet Peas, &c., which was a centre of attraction during the day and evening." On this table a shower bouquet of a pale heliotrope Cattleya, Odontoglossum Alexandrae, and Lily of the Valley, interspersed with delicate fronds of Asparagus, was a perfect vision of loveliness marvellous in its lightness and daintiness. A gold medal was awarded this exhibit.

Private gardeners contributed liberally to the show, and many highly creditable displays were made, which space forbids us to particularise. The exhibit of Mr. Kidd, gardener, Carberry Tower, was specially honoured by the award of a gold medal. Malmaison Carnations were his leading feature, and were very fine, also Uriah Pike, very rich in colour. Tastefully arranged vases of Roses were also conspicuous, especially one of Gustave Regis, a very beautiful decorative Rose, which as a buttonhole flower has hardly an equal. Paul's Carmine Pillar was also in beautiful form; a handsome vase of Lilium Harrisii and vases of Sweet Peas added charm to this beautiful exhibit. Mr. Alexander, gardener, Niddry, exhibited a table of twenty-four varieties Sweet Peas, which showed very high culture, and were effectively set up. This was much the finest Sweet Pea exhibit, and was awarded a silver medal. Mr. Wood, Oswald House, tastefully filled a table in the vestibule of the hall with admirable plants from his well known Orchid and other treasures. Mr. Macmillan, Trinity Grove, had a charming little exhibit of choice hardy flowers, Tea Roses, &c. Mr. Swales' Streptocarpus, Gloxinias, and Sweet Peas were much admired. Mr. Cowan, Penicuik, exhibited a very beautiful table of British Ferns in rare varieties, and remarkable for their freshness and healthy appearance. Mr. Comfort (the popular S.H.A. president) had an attractive exhibit of herbaceous plants, as had also Mr. Murray Thomson, the energetic secretary of the Caledonian. Mr. Whytock, Dalkeith, exhibited some interesting specimens of cut flowering shrubs.

A very attractive exhibit was made by the School of Gardening for Women, Inveresk, consisting of Sweet Peas, Iris, and other flowers, also Mushrooms, Cucumbers, honey, &c.; a bronze medal was awarded. Fruit was small in quantity, but of excellent quality. The Royal Sovereign Strawberries from Mr. Scougal, Eskbank, were marvellous for size and colour and bloom. Nice Strawberries were sent by Mr. Whytock. Mr. Murray, Culzean, contributed beautiful Pine Apples and Melons; Grapes came from Mr. Wann ("Kennet").

The arrangements were most admirably carried out by Messrs. Thompson and Lonie, the twin secretaries, to whom great credit is due.

### Wye Agricultural College.

Last Saturday was prize day at this college, when Viscount Midleton, Lord Lieutenant of the County of Surrey, presented the diplomas and other rewards. Professor A. D. Hall, principal of the college, presided, and in his address appealed for support from farmers and their sons. Viscount Midleton congratulated the college on its steady progress. Every year, he said, emphasised the growing importance of such institutions, as Great Britain had to face competition not only from the Continent of Europe, but from that vast continent across the Atlantic which is entering so seriously into rivalry with us in all branches of trade, commerce, and industry. How severe the competition was only those, who, like myself, had taken a long and practical interest in agriculture, could estimate. We were handicapped in many respects because those engaged in agriculture had no really scientific knowledge of the principles underlying it. They knew they did wrong, and nothing more, and often when they did right they did not know why they did it or what effect would be produced by their operations. That was just what they could learn at Wye College, where an honest and successful attempt was being made to cope with the problems of technical education in connection with the most important of our national industries, and to teach farmers the principles on which they ought to go in order to make the soil more fertile and the yield more productive.

# THE BEE-KEEPER.

## Extracted Honey.

It is now generally admitted that a colony will produce twice as much extracted as comb honey, and when it is considered that the former, if fully ripe when removed from the hive will keep any length of time, and that sections are apt to crystallise as the cold weather advances, and consequently become almost unsaleable, the advantages of producing run honey will be apparent. To visit a successful bee farm at the time of deprivation where extracted honey is worked for, and see the tiers of supers containing this natural sweet creates an imperishable impression on the mind. There are districts, however, where sections are practically unknown, and the bee-keeper should therefore endeavour to obtain his harvest in the form in which it is demanded locally.

Two facts must not be lost sight of in producing honey in any form in quantity: first, nothing but the most powerful colonies will give satisfactory results, and in order that there may be no misconception as to what a powerful colony is, it is as well to interject here that the constant stream of traffic entering and leaving the hive appears to block the entrance, and the air resembles nothing so much as a hailstorm in progress. Secondly, that the perfection attained in queen rearing has been so marked that the ordinary single brood chamber is found insufficient to accommodate the increased fertility of the modern queen. Providing a young, and consequently prolific, queen heads a stock there will be little difficulty experienced as regards strength if properly managed, and the following plan may be worked:—So soon as the brood chamber is completely filled with bees and brood and the honey flow commencing, which is evidenced by the bees falling heavily on the alighting board with distended bodies, and the whitening and extending of the cells next to the top bar of the frames, or the presence of thin newly gathered nectar in the hive, a shallow super or a second brood-chamber should be placed underneath to enlarge the brood-nest, and after first placing the queen excluder over the body box another shallow super should be placed above. The one below will immediately be taken possession of by the queen for ovipositing, and the bees thus obtained will in the height of the season rapidly fill the combs of the one above with honey, which may be removed and extracted as soon as completed and returned to be refilled, or further shallow supers may be given and left on the hive until the close of the harvest.

When giving honey chambers care must be taken to prevent the escape of heat at the junctions between badly fitting supers. This may be accomplished by inserting lengths of folded newspaper, or pasting slips of paper over the crevices. If there is any doubt as to the strength of any colonies they should be worked on the doubling plan. Greater harvests are secured by this than by any other method of management. To double, all that is necessary is to remove the inferior queen, if any, and if it is found desirable to preserve her, make a nucleus on the old stand and place the hive and its contents bodily upon the other, making a double chamber, which by the hatching above and below will soon teem with life, and this enormous population will fill the upper storey with honey, which should be extracted as often as necessary, or if in possession of plenty of drawn out combs (one of the apiarist's valuable assets when working for extracted honey) they may be added and left until the close of the season. The nucleus should consist of one bar of brood and bees and two empty combs, as a proportion of the bees from the doubled portion will return to the old stand and strengthen it. Colonies thus treated are effectually prevented from swarming, and the union of the two stocks enables it to place a larger force of honey gatherers in the field than would have been possible if left in their former condition. Although this method involves some labour, it has greater compensations, and the plan has many adherents. The use of shallow supers for extraction is preferable, as they are not only handled with greater facility, are less liable to fracture in the exterior, but are also more rapidly sealed by the bees, and uncapped. Where deep combs are used throughout, the top stories should, after extracting, be placed below the brood chamber to give the queen room for egg laying, as the cleaning of the wet combs acts as a most powerful stimulant. By this means swarming is checked with tolerable certainty by obviating its greatest incentive, namely, completion of brood nests. There is no loafing, the energy of the bees being directed to storing surplus, consequently there is a much greater yield.—E. E., Sandbach.

## Kalanchoe flammea as a Bedding Plant.

As the world grows older so in some respects it improves, and surely if we can hope to see masses of this superb Crassulaceous plant adorning our outdoor beds in summer (with *Primula obconica* as an edging!) may we not report progress? At Kew it has been given a trial, and the plants seem perfectly satisfied with the conditions of life under which they are now existing.



## Hardy Fruit Garden.

**MORELLO CHERRIES.**—The large amount of growth which the trees have made necessitates that the removal of superfluous growths, especially those of a weakly character, shoots unsuitably placed, also strong, succulent, sappy growths which have started from old parts of the wood, should be dealt with gradually. Where the trees have hitherto had the required attention, rubbing out the undesirable shoots early, less manipulation in this respect will be demanded, but attention must be given to selecting the best growths for laying in. This is necessary alike in the interest of the wood as well as the fruit, the latter requiring abundance of light and air to develop size, flavour, and colour, while the same conditions must be present to ripen the wood. The greatest proportion of wood is laid in at full length, and if enough can be found to properly furnish the whole required, this will be found better than retaining shortened shoots with the idea of forming spurs. Trees from which the fruit has been cleared may be frequently syringed in order to destroy or keep down attacks of red spider. Moisten the roots thoroughly, which is another aid in subduing insects and ensuring general good health. The fruit may be kept late if so desired by netting up a whole or portion of a tree.

**PEACHES AND NECTARINES.**—The syringing, which is practised frequently with a view to maintaining the trees clean, cannot be continued after the fruits commence to colour. At this stage, if not carried out before, lay down a liberal mulching over the roots in order to retain the moisture in the soil as long as possible. To expose the fruit fully to the influences of light and air, all the growths it is necessary to retain should be carefully laid in position and the superfluous shoots removed. Even then the fruit may be shaded by large leaves, which ought to be drawn on one side, slightly tying them. In some cases the leaves may be partly shortened, but this is not advisable to a great extent.

**PLUMS AND DESSERT CHERRIES.**—The methods adopted in laying in and regulating the growths are practically the same. Trees allowed to make plenty of free growth, which it is not intended to shorten back, ought to have early attention in training it in, not only for the neat and cultivated appearance it gives the trees, but so that the shoots not required can be dispensed with, thus allowing a free circulation of air and light among the growths, indispensable aids to the ripening of the fruit and the perfecting of the wood. Neglect in training, and the consequent crowding of the wood, results in weakened growth, attacks of insects, and a check to the free swelling of the fruit. Both Plums and Cherries are very subject to the attacks of fly, and when trees or walls are so infested before laying in the shoots make an attempt to give them a general cleansing with a garden engine, followed by an application of insecticide, except where the fruit may be ripe or ripening. Dipping the shoots in a vessel containing some effective solution may be used where the tips of the shoots are much infested. A thorough syringing must be given as soon as the trees are cleared of fruit. The majority of Plums, however, being still green and swelling, both water and insecticides may be used. Give special attention to the roots, seeing that they have an adequate supply of moisture at this period, for the demands of food and moisture are at their maximum, and if not sufficiently met are the great cause of throwing trees into ill-health, inviting disease and insect attacks. Applying a mulching over the roots will prevent the hot sunshine drying up the surface, and it is also useful for distributing the water and liquid manure supplied, and maintaining the roots cool. Wall Plum trees bearing an exceptionally heavy crop may advantageously have the fruits thinned, removing all the smallest and ill-formed fruits, also reducing the number of bunches. The branches of either Plums or Cherries on which summer shortening is practised must have the shoots pruned to four or five leaves.

**APPLES AND PEARS.**—In whatever form trees on walls are grown it is necessary to check the further growth of the summer side shoots by shortening them to four or five leaves. Second growth of a vigorous character often results from this, but it is less likely to do so now than when carried out earlier. Where there is an exceptionally good crop some thinning of the fruits must be carried out or there will be much small fruit of inferior quality. It will be best to go over the trees several times, but to the early varieties which will mature next month the final thinning may be given. Liquid and artificial manure may be given with advantage to swelling fruit.

**STRAWBERRIES.**—All runners which are well rooted in small pots should have the runner wire cut and the pots removed



to a hard base where they may stand closely together until required to plant or pot. Afford sufficient room to runners recently epgged down, and continue to select the best of others for the same purpose until the whole of the stock required has been obtained. Beds which have been the longest in existence ought, if giving signs of deteriorating, to have the plants cut or pared off close to the ground, left to dry, and then be burnt. Before occupying the ground with another crop thoroughly trench and manure. As soon as possible after fruit has been gathered and the best runners secured, clear away the whole of the growth between the rows.—EAST KENT.

### Fruit Forcing.

**VINES: IN POTS FOR EARLY FORCING.**—The Vines for starting in November, to afford ripe Grapes in late March or early in April, should be of the early and sure forcing varieties, such as White Frontignan, Foster's Seedling, Black Hamburgh, and Madresfield Court; and now have the wood ripe, thoroughly hardened, and the buds plump. If there be any doubt about these matters, keep the house rather warmer by day, 80deg to 85deg, closing early so as to raise the temperature to 90deg or 95deg, and open the ventilators at night. Afford sufficient water to prevent the leaves flagging, or liquid manure may be given to help them to plump the buds. The foliage cannot have too much light. Keep the laterals well in check, leaving no more than absolutely necessary to appropriate any sap that may be in excess of the leaf requirements, and so prevent the principal buds starting. When sufficiently ripened, as indicated by the wood being brown and hard, and the buds prominent, they may be removed to a position outdoors in the full sun, standing on boards or slates in front of a south wall or fence, securing the canes to the face of the wall, only giving water to prevent the foliage falling prematurely, and having some waterproof material to throw the water from the pots in case of heavy rain. In this position they will rest, even if the leaves are not shed. When the leaves turn yellow, or the falling hue, commence reducing the laterals, and when most are off cut them in closely, and shorten the canes to the length required, placing them in an airy shed or cool, dry place, until the time arrives for forcing. Keep the soil dry, yet not so dry as to cause the wood to shrivel.

**EARLIEST FORCED HOUSES.**—This will vary as to time in different establishments, but it is not desirable, as a rule, to start permanent Vines before the beginning of December, so as to afford a supply of ripe Grapes from the end of April or beginning of May onwards. A dry atmosphere is desirable for the thorough ripening of the wood, but it will not be necessary, except in the case of young Vines not forced early before, to employ artificial heat. All laterals should be kept stopped, and rest gradually induced by keeping the house cool and the border dry. Inside borders, however, may require watering, but if they have been mulched it may not be necessary, and outside borders will not take any harm, provided they are of sound materials and well drained. Premature ripening of the foliage is undesirable, and is generally occasioned by destruction of the leaves through red spider or too dry an atmosphere and deficiency of water at the roots. Where the Vines are in an unsatisfactory condition prepare for lifting at an early date, getting fresh loam and clean drainage, so that the work may be done quickly when started. There is no danger of losing a crop provided these operations are properly and promptly performed. It is desirable to lift the roots and place them in fresh soil nearer the surface whilst there is foliage on the Vines; therefore work of this kind ought not to be delayed in the case of Vines that are to be started early in December, which will need pruning by the middle of September, or a little later in the case of lifted Vines. In the case of Vines that have not before been started early, and are required for affording ripe Grapes at the end of April or early in May next season, it will be necessary to prepare them for the process, cleansing them thoroughly by syringing or an insecticide as soon as the crop is off; and, if there is any doubt about ripening the wood or plumping the buds, it will be necessary to keep the house rather close by day, but with sufficient ventilation to cause evaporation and allow the moisture to escape. Give no more water at the roots than will prevent the foliage becoming limp. If the weather prove cold and wet employ fire heat in the daytime to maintain a temperature of 70deg to 75deg, with moderate ventilation, and turn the heat off at night to allow the pipes to cool. This will soon cause the buds to plump, the wood to ripen, and induce rest, which, for Vines to be started at the time named, should be complete by the middle to the end of September. When the Vines have the wood ripe ventilate fully day and night.

**SECOND EARLY VINES.**—Those started at the New Year have the crops cleared, and should be cleansed by means of the syringe or engine, and, if needful, by applying an insecticide. If there be any mealy bug or scale use petroleum, a wineglassful to 4 gallons of water, in which 8oz of softsoap and 1oz of washing soda have been dissolved, keeping the mixture well agitated whilst it is being applied by alternately squirting syringefuls of the mixture into the vessel and over the Vines, wetting these

and every part of the house thoroughly. It is best done on a calm evening, and should be repeated at intervals of a few days, and is best applied at a temperature of 135deg. If there are any plants they must be removed, and if the roots of the Vines be near the surface cover the border with dry short material to absorb the waste. Keep the laterals fairly in check, but not closely pinched, unless the Vines are very vigorous and not ripening the wood well, then keeping the house rather dry at night with all the air possible, and somewhat close and warm by day, will tend to promote the maturity of the wood and buds. In stopping vigorous Vines regard must be had to the principal buds, not pinching them so close as to cause them to start into growth. Such Vines should be kept without water until the leaves are a little limp, but not to the extent of flagging. Vines that, on the other hand, are not strong, having been enfeebled by continuous cropping or other causes, should be encouraged to make growth by applying liquid manure to the border, or top-dressings of the advertised fertilisers washed in; but, whatever extraneous foliage is made, must not be allowed to interfere with the free access of light and air to the principal leaves, which should be kept clean and healthy, so that they may appropriate some of the extra food, assimilating and storing it in the adjacent wood. Ventilate freely day and night.

**GRAPES RIPENING.**—Admit air constantly, enough with a gentle warmth in the pipes to insure a circulation. In ripening most Grapes swell considerably, therefore a certain amount of air moisture is necessary, and there must not be any deficiency of water at the roots. Give the border a thorough supply if necessary in the early part of a fine day, so that the superfluous moisture may be dissipated before night. Avoid, however, making the soil sodden and sour by needless applications of water or liquid manure, as this condition at the roots invariably results in shanking. If the Vines are heavily cropped, afford substantial food, such as nitrates, phosphates, and sulphates, or the advertised fertilisers, which act promptly and steadily, and allow them plenty of time, otherwise, if there be any hastening of the ripening and a deficiency of moisture and nourishment, it is likely the fruit will be defective in colour. A temperature of 60deg to 65deg at night, with air, is a great help to Vines with a heavy weight of Grapes. If kept warmer at night the Grapes ripen faster and colour less freely. A temperature of 70deg to 75deg by day from fire heat is ample, for heat will not impart colour. A moderate moisture should be secured by damping occasionally, and, if possible, allow the laterals to extend, for it is chlorophyll that is needed; but over-burdened Vines rarely push laterals, having enough to do to supply the principal foliage and Grapes with nourishment.—ST. ALBANS.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.              | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|--------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
| 1902.<br><br>July. |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                    |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
|                    |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ...13       | S.W.               | deg. 64.1               | deg. 56.2 | deg. 78.4 | deg. 51.2 | Ins. —      | deg. 60.3                             | deg. 59.8      | deg. 57.2      | deg. 45.2                    |
| Monday ...14       | S.W.               | 74.4                    | 61.0      | 84.6      | 49.3      | —           | 61.2                                  | 60.0           | 57.2           | 44.5                         |
| Tuesday ...15      | N.W.               | 68.9                    | 62.7      | 82.8      | 55.3      | —           | 62.5                                  | 60.3           | 57.2           | 45.3                         |
| Wed'sday 16        | N.W.               | 69.9                    | 62.2      | 75.0      | 57.0      | —           | 63.3                                  | 60.8           | 57.2           | 47.0                         |
| Thursday 17        | N.E.               | 66.2                    | 58.3      | 73.5      | 50.5      | —           | 62.2                                  | 60.9           | 57.2           | 43.0                         |
| Friday ...18       | N.W.               | 61.0                    | 54.0      | 67.5      | 47.3      | —           | 61.9                                  | 60.7           | 57.5           | 39.3                         |
| Saturday 19        | N.N.W.             | 56.2                    | 52.2      | 66.2      | 44.2      | 0.03        | 60.2                                  | 60.5           | 57.5           | 35.3                         |
| MEANS ...          |                    | 65.8                    | 58.1      | 75.4      | 50.7      | Total. 0.03 | 61.7                                  | 60.4           | 57.2           | 42.8                         |

The first part of the week was bright and very warm, the latter part was dull and much cooler.

### Trade Catalogues Received.

Alex. Dallièrre, Gand, Belgium.—*Autumn Price List (1902) of Stove and Greenhouse Plants.*

E. H. Krelage & Son, Haarlem, Holland.—*Dutch Bulbs.*

Ant. Roozen & Son, Overveen, near Haarlem.—*Dutch and Cape Bulbs.*



\* \* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

### Plan of a Bothy—Competition.

"Well-wisher" promises a first prize of £3, and the Editor supplies a second prize of £1.

The rules of the competition are as follows:—The plan, drawn to scale, must not exceed 7in. broad by 7in. deep, and must be clearly defined on stout paper. The plan must provide suitable accommodation for six men, and the cost of the building ought not to exceed £200 to £220. A statement of the general items of cost should accompany the plans, together with any written comments thereon. The competition is open until Christmas, 1902, by which date all plans must be in the hands of the Editor. The sender's name and full address should be enclosed when sending the plan, and the sender will alone be held responsible for it.

**VINES IN POTS (M.).**—The Vines no thicker than a lead pencil will be of no use for fruiting next season. They should be as thick as the middle finger or thumb, and have hard, brown, well-ripened canes, with eyes like nuts, and be in 12-inch or 13-inch pots. The Vines should be cut down to a couple of eyes, and when they have produced a few inches of growth next season shake out and repot into 7-inch or 8-inch pots, and when these are filled with roots, and before they become matted around the sides, shift into the fruiting pots.

**BUDDING CHERRIES ON MAHALEB STOCK—MADRES-FIELD COURT GRAPE CRACKING (J. M.).**—The early part of July is a proper time to bud this stock as well as the common Cherry stock. The most probable cause of the Grapes "splitting" is an insufficiency of nutriment during the early stages of swelling and an over-abundance when the Grapes are approaching the ripening stage, along with a moist atmosphere. This Grape is liable to crack, and requires a rather dry, well-ventilated atmosphere, with a drier condition at the roots when ripening than most other Grapes. Well grown it is one of the finest of autumn Grapes both in appearance and quality.

**STRAWBERRY PLANTS DYING OFF (S. H. G.).**—"I shall be glad if you can tell me what is the matter with my Strawberries. Numbers of them die off the second year, and the third year most of them go. The first season after planting they do well, but after that they seem to go back. The variety is mostly Royal Sovereign, though other varieties suffer as well. I may say I always bastard trench before planting in the autumn. Our soil is very heavy here. They seem to go so soon as the hot weather sets in."

[The stems are infested by eelworm, *Tylenchus devastatrix*, and also by a fungus, a species of *Fusarium*, which attacks the plants at the roots and ascends the stems in a similar manner to sleeping disease in Tomato plants, the vascular bundles or woody tissues being quite brown and dead. We have noticed the disease for a number of years, but have not been in a position to determine the species definitely, for it appears only *F. solani* specialised on the Strawberry, hence hardly distinct enough for naming *F. fragariae*. It is, however, very common, and like sleeping disease the plants do not collapse suddenly, but gradually, and generally in the second or third year of their existence from the runner. The eelworm may play some part in the collapse, but they are not affected by what is known as the Cauliflower disease—attack in the crown by stem-eelworm, *Tylenchus devastatrix*. Indeed, we consider the fungus the cause of the evil, and as it leads a saprophytic mode of life before assuming the parasite it is likely that a good liming of the land would act as a preventive. We should, however, prefer dressing the land, after bastard trenching and manuring, with basic cinder phosphate 7lb per rod, and 3½lb per rod of kainit, pointing in a month or six weeks in advance of planting and forking over the ground a foot deep before planting the Strawberry runners. In spring the plants, planted in August, may be dressed with a mixture in equal parts of superphosphate of lime and nitrate of soda, applying 1½lb of the mixture per rod when the plants are starting into growth, pointing in very lightly. This treatment we have found satisfactory, the plants being treated as biennials or at most triennials. As your land is heavy, it would, perhaps, be advisable to use sulphate of ammonia, one-third the amount, instead of kainit, and sulphate of ammonia in place of nitrate of soda. However, we have found the other preparations give good results.]

**MELONS FAILING (I. E.).**—Even if you had supplied us with some particulars relative to the treatment your plants have received and the weight of the crop, we suspect it would have been difficult for us to state the cause of the evil; without some such information it is impossible. The fact that your plants have produced a second crop suggests that they are more or less exhausted; this, with possibly some little inattention in watering and ventilating, would cause the foliage to collapse and the stems to shrink as in the specimens before us. Withholding water when the fruit is approaching maturity is often carried to excess, and many crops are thereby impaired if not ruined. Whether this is the cause of your failure we are unable to say, being quite without data for determining the point, or, in fact, for comprehending the case in a satisfactory manner.

**GRAPES NOT COLOURING (Idem).**—The chief cause of Grapes failing to colour is undoubtedly defective root-action or insufficient support; injury to the foliage, either by insects or scorching, also contributes to the evil. You do not think the Vines have been overcropped because one of them is not bearing more than 8lb of Grapes, but you omit to state either the age or size of the Vine, which information, as you must perceive on reflection, is absolutely necessary for us to form an opinion on that point. We have seen hundreds of Vines overcropped with 8lb of Grapes on each, and hundreds more undercropped with thrice that weight of fruit. Everything depends on the constitution of the Vine, the activity of the roots, and the fertility of the border. We strongly suspect that, although the crop may appear light, it is really too heavy, and that more vigorous root-action with fresh soil are needed to bring the Vine into a healthy condition that will enable it to finish the crop. This opinion is founded on the assumption that the foliage of the Vine is clean, not overcrowded, and apparently healthy. If we were acquainted with the actual condition of the Vines and border and the leading points of your treatment we should have no difficulty in answering your letter, but with a lack of knowledge on these points we cannot reply satisfactorily to ourselves.

**MELON LEAVES DISEASED (F. W.).**—"Will you please tell me the cause of my Melons going brown at the leaves, then drying right up? Others in the same house are doing well."

[The leaves are attacked by the fungus called *Cercospora melonis*, which forms irregular, dry, brown spots on the leaves, and the discolouration extends through the whole leaf, the plant attacked losing its leaves in great numbers daily, while the stem and roots are apparently quite sound. The disease often spreads quickly, being favoured by the dispersion of the dropped-out portions of the leaf bearing conidia. It is most abundant during a spell of dull damp weather, though the effects are most pronounced on a sudden change from such weather to bright and droughty, the whole leaves on a plant suddenly collapsing. As moist conditions favour the parasite it would be advisable to give plenty of air, especially in the early part of the day, and not allow water to rest on the foliage for any length of time, especially at night. As Bordeaux mixture, even in dilute solutions, injures the tender foliage, and ammoniacal solution of copper carbonate acts somewhat prejudicially on plants with hairy leaves, we should spray the plants with a solution of permanganate of potash, and also saturate the surface of the soil with the solution. Condy's red fluid, a wineglassful, or two fluid ounces to a gallon of soft water, would, perhaps, be quite strong enough, or one ounce of the crystals to three or four gallons of water. The chief thing, however, is free ventilation, even if fire heat have to be employed in order to maintain the required temperature, and admit of a circulation of air in dull damp weather.]

**STRAWBERRY LEAVES DISEASED AND FRUIT DECAYING (A Perplexed Gardener).**—"I am forwarding to you some Strawberry plants and leaves; could you please tell me the cause of their decay? The plants are in their second year, and until a week ago they appeared to be quite healthy, and very large fruit; now the fruits are decayed and the plants are dying. A plot in a gentleman's garden about six miles away are in the same condition. They have not had any kind of manure since March."

[The leaves are affected by the Strawberry leaf blight in a very malignant form, the spots not yet having appeared, but the mycelial hyphae is spread in the whole tissue of the leaves. This, *Spharebia fragariae*, will no doubt appear later. The fruit is infested with the white mould, *Botrytis candida*, and there are also the conidial condition of the leaf spot fungus, once called *Ramularia tulasnei*. The only repressive measure is to collect the affected fruit and burn it. To prevent the disease another season is to cut off the tops of the plants as soon as the fruit is gathered, covering them when dry with a light coating of straw, or shaking up the old mulching, and when all is dry burning them. This harsh treatment may seem likely to kill the plants, but such is not the case when the material for burning is not excessive, being attended with most satisfactory results, the burned over plants soon surprising the operator by the vigorous and healthy appearance of the new foliage which soon unfolds. The disease can be checked by spraying with Bordeaux mixture. Spraying should commence when the leaves unfold, and be repeated at intervals as required until the flowers appear.]





## Weaning Lambs.

So many farmers make their lambs fat and sell them to the butcher whilst yet sucking their dams, that the difficulties of weaning are not very generally understood. At the risk, therefore, of being accused of repetition, we propose to make a few observations on lamb management between now and Michaelmas. Farmers differ greatly in their opinions as to the best time to wean lambs. We ourselves do not think that any hard and fast line can be drawn in that respect, but due regard must be had to the state of health of the lambs, the milk supply of the ewes, and last, but by no means least, the available supply of suitable food which can be provided in lieu of that milk.

A lamb begins to graze at a very early age, and, seeing its mother enjoying the grass, naturally nibbles a little itself. It thus gradually takes to its natural vegetable food, of which, as its requirements increase, a larger daily quantity is consumed, whilst the mother's milk, which of necessity is at least a stationary, if not a vanishing quantity, becomes by degrees of less importance. It is the provision against too sudden a withdrawal of this support that should exercise the flock-master's greatest effort just now. For this reason we do not advocate very early weaning in a season like the present, when all pastures are very full of rank growth, and it is impossible to provide a bare one.

A lamb which has reached the age of eighteen or twenty weeks, during the whole of which time it has had a regular supply of milk, will feel the withdrawal of it, not only from the loss of a certain, if small, quantity of food, but from the lack of its digestive influence on the other food daily consumed, and this lack is especially felt when the grasses and clovers in the pastures are of a rank, watery, and indigestible nature. It is therefore most important that before weaning other aids to digestion should be introduced, and the lamb's appetite for dry food stimulated, so that when it is deprived of its dam it may be readily induced to eat mixed foods, which will make the loss of the mother's milk as little felt as possible.

There can be no doubt that the acidity of the milk is a great factor in aiding the digestion of other foods, and something of a similarly acid nature must be substituted for it. Malt in moderate proportion forms an invariable constituent of all the best lamb food mixtures, and it may be that it is the best substitute for the sugar of the milk. Chemists have always maintained that malt was a desirable food for stock, on account of its being an aid to digestion, and its excellence in this respect had much to do with the repeal of the malt tax.

When purchasing lamb food, then, see that you have some malt in it. Large farmers in some cases mix their own lamb foods, whilst others, and these some of the largest owners of sheep, buy their whole supplies. A mixture is easily enough made, but in mixing on a small scale there is difficulty in procuring the small quantity of the different constituents which is required.

A good lamb food should contain gentian, fenugreek, malt, barley, oats, maize, locust bean, and linseed cake. The first three and the last two are most important. When maize is cheap, and linseed cake dear, lamb foods are liable to contain too much maize and too little cake. How valuable a food locust bean is may be readily understood from the fact that sufficient pressure was brought to bear upon the Chancellor of the Exchequer to induce him to withdraw the import duty which he proposed to place upon it.

As a rule, it is not difficult to get lambs to take to a mixed food such as we have described, even if they have not previously been accustomed to trough food; but if, as should be the case, they are already familiar with linseed cake, the only care to be exercised will be that of judiciously limiting the allowance. Half a pound per head per day may be amply sufficient on a dry pasture, and in fine weather; but if the pastures are flushed with rapid growth, and the grass and Clovers very lush, give the lambs as much as they will eat, and at two meals instead of one.

Especially necessary is it to give a meal of dry food early in the morning; this should be the shepherd's first work, for if a lamb eats half a pound of lamb food in the early morning, it will not gorge itself afterwards with unwholesome watery food, which may be the only form of pasturage available.

If on the farm there is a field of Clover fog or after-math, this may be found most useful for lambs in August; but the fog should be allowed to get into flower before the lambs are put on it, and they should not be allowed to graze when the Clover is very wet with dew. They may be put in any bare pasture, or even a roomy yard at night, and given a good feed of trough meat in the morning before they return to the Clover, and at any cost their making of the latter a staple meal must be prevented.

Change of pasture does wonders for weaned lambs, and nothing is more beneficial than a run in the lanes to pick up a few bramble leaves or other natural tonics. An acre or two of autumn sown Cabbage, which is now ripe and well hearted, is the safest of all foods. The Cabbages can be given to the lambs anywhere with benefit. If the pastures be bare, the succulent Cabbages are most welcome, whilst if the grass be too plentiful and rank, the Cabbage will be found a wholesome alternative, and may be used for a morning meal in confinement until the Clover or grass has time to dry. The pulling and carting of the Cabbage may give trouble, but little compared to the benefit gained.

## Work on the Home Farm.

The rain, which fell heavily shortly after we wrote last week, was hailed by haymakers as anything but a blessing. As it was continuous, or nearly so, for forty-eight hours, it did little harm except to the few cases where the hay was made and still lying spread out. The wise haymaker gets his hay into cock as soon as he sees the clouds forming. As the season is such a late one few meadows were cut, and they only recently. The mowing machine has been hard at work since and has revealed some fine crops. Clover was disappointing: grass hay will be very good, and with a continuance of the fine hot weather we are now enjoying should be stacked in the best condition.

A record hay crop, both for bulk and quality, should be a good augury for the Corn harvest. The grain crops are looking wonderful; they have shot out well, and except here and there a patchy piece of Wheat the fields present a very full and level appearance. There has been much talk of a very late harvest, but though it will not be as early as the last year or two, it will be little later than the average, and we think far better from a money point of view. Considering the weight of straw there is very little laid Corn at present, but we shall not want much more rain before the crops are cut. They will severely test the qualities of our string binders as they are. There will certainly be a much greater consumption of string this year, and farmers who have not laid in a stock had better be up and doing.

The reapers must be overhauled and cleaned ready for use, but if they were put away in good condition little more than a good oiling may be required before they start work. All worn sections of the knives should be replaced with new ones, and the sections all well ground up. Note should also be made that all parts specially liable to breakage have their respective duplicates in stock. A machine which can only be worked for two or three weeks in a year must not be stopped for want of a little foresight and expense in providing duplicate parts.

Dairy cows are well maintaining the milk supply, and butter remains at a low price for the time of year. There is so much grass that milk and butter cannot fail to be plentiful and cheap. Eggs, too, are cheap for the time of year (sixteen for the shilling). There has been good fortune as a rule amongst chickens, and prices for young fowls will keep reasonable this year.

## State of Agriculture in Russia.

A South Russian landowner contributes to the "Novoe Vremya" a most pessimistic article on the condition of agriculture in Russia. Both landowners and peasants, he declares, are proceeding rapidly along the road to ruin; both classes have burdens of debt from which they can never hope to liberate themselves, and neither class is ever in a position to pay its taxes punctually and fully. In the winter there is no work for the peasants to do, while in the summer there are not enough men left in the villages to do the work required. Owing to their financial difficulties many cultivators of land are unable to keep horses, to employ modern machinery, or to manure the ground properly, so that not only is the land yielding less than it might do in favourable circumstances but it is in many cases being exhausted by faulty cultivation. The writer proposes that co-operative farming on a large scale should be introduced to remedy the evils of the present system.

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*Journal of Horticulture.*

THURSDAY, JULY 31, 1902.

## Wasted Forces.

**M**ISDIRECTION of energies and lamentable waste of force in gardens are actualities that are continually being brought before our notice. Economy teaches us to make the best use of everything we have at command. It very often happens, however, that forces are simply frittering themselves away to waste, which, if diverted into a useful channel, would prove to be of immense value. This sort of thing is going on in the commonplace, every-day routine of both garden and farm. It is frequently unseen, because the persons most interested have not taken the trouble to look into it. Only a small stream of water, continually running in a wrong direction, would soon flood and spoil a meadow; but by concentrating its force into one channel, it possesses power sufficient to drive a mill-wheel.

A striking illustration of wasted energies came before my notice only recently. In company with a farmer friend, I was examining the fruit trees in his orchard near the homestead, which, by the way, were showing a clear want of force. Natural conditions for growth were not so favourable as they might have been, and in the shallow medium the long drought of last summer was being felt in its consequences. The farmer was perturbed, because only a few seasons before he had spent a considerable sum of money in planting the orchard, and naturally was hoping for some return. The fate of the trees seemed to hang in a balance, though the case was far from being a hopeless one. A suitable fertiliser was wanting, something to build up and support the trees, and without the necessary material there was a likelihood of them going the wrong way. We passed out of the orchard into the farmyard, and there was the

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force for which the fruit trees were pining, running to waste. Cattle sheds and stables extended along the sides of the square yard: a heap of dung was piled up in the centre, and from this and the buildings numerous little streams of coloured liquid trickled and emptied themselves into a kind of pool. This receptacle was full, and from it rich-looking liquid manure was overflowing and running away to strengthen the growth of Docks and Nettles in an adjacent ditch. Doubtless this sort of thing had been going on for some time, and I should not like to say how many gallons of the liquor had run away.

Here was a case of wasted force, and the farmer looked surprised when I told him that the very stuff which was being utilised to strengthen the growth of weeds might be the salvation of his fruit trees. He had never thought of it, he said, and besides the pool was empty in the summer, when the trees were suffering. He did not see the use of watering fruit trees when it was raining every day. I will not weary the reader by repeating the arguments I put forward to prove the difference between watering and feeding the trees with good liquid manure, and to show the advantage of applying the latter even in the winter when growth is dormant. The remarks went home, so far as to the giving of instructions for the immediate emptying of the cesspool on to the ground round the stems of the fruit trees. The wasted force of scores of farmyards might be well utilised in the same way judging by the appearance of the orchard trees in their vicinity.

Another instance, carrying with it a useful lesson, came before my notice at a village flower show last summer. Exhibited in the fruit section was a dish of remarkably fine Red Currants from a cottage garden. They were so much superior to any of the rest that everyone thought that they must be a special variety, and I took an opportunity of questioning the grower respecting them. At first he seemed inclined to think that doubts were being entertained as to whether he had really grown the fruit, and was annoyed on this account, but when re-assured on the point he freely told all there was to tell about the remarkable Currants. He knew there was nothing special about the variety because he had raised the bush himself, and yet the fruit on the one specimen was far superior to that on the rest of the bushes. The man had only one explanation to offer, and doubtless it was the right one. The bush which grew the fine Currants happened to be situated in close proximity to the pigstye, and the liquid manure, draining from it, after being collected in a hole, got poured on the one particular bush! The force in this instance was not wasted, but monopolised; and the horny-handed Currant grower gave me a knowing look when I suggested that it would be well to let a few more of the bushes benefit by the pigstye liquid. It was evident that his mind was already made up on that point, and he had taught himself a useful lesson without being, at the time, aware of it.

Perhaps the best way of turning into a channel of usefulness the wasted forces of a small tree is to lift it, cut back the vigorous roots, and replant in another position; and, with trees too large for this operation, judicious root-pruning is qualified to bring about the same result. To simply cut back the branches of vigorous trees serves no useful purpose, for the force is neither checked nor diverted, as the thickets of rank, useless growth breaking from below the points of cutting soon prove, and the last state of the tree is worse than the first.

Of late years the use of artificial manures has come conspicuously to the front for the growing of fruit. Stubborn prejudices are being worn down, and the value of suitable mixtures is becoming more widely recognised every season. But the man who uses chemical fertilisers should not forget that by unthoughtful application their forces may readily be wasted. Mr. S. T. Wright, the superintendent of Chiswick, is a strong advocate for the use of chemical manure in fruit culture, and his opinion is founded on the fact that for ten years he used nothing else at Glewstone Court, and his success was unqualified. But evidently he observed how force could be wasted by careless application, for in his essay on Commercial Fruit-growing, written for the R.H.S., he says, "The best time to apply these manures (chemicals) is immediately the fruit is set, as it will then assist it to swell and develop into large size. If applied before the crops are set there is still a risk of there being no fruit that season owing to climatic or other causes, and then the manure would force a strong growth, and thus do more harm than good in many cases." Another lesson may be taken from this, to the effect that horticulture knows no set rule, and the man who works by rule without studying the conditions is not long before he errs. It is obvious that all our operations should be

governed by circumstances and conditions and by careful study, so that many forces which are being wasted might be saved or diverted into profitable channels.—G. H. H.

## Bouquet Making: Harmony and Arrangement.

Persons who are not particularly successful at bouquet-making generally assert that there is a "knack" about it which not everybody can hope to discover. I admit that some persons seem to have born with them the knowledge of just what kinds of flowers to use, just how many and just how to put them together. They do not have to learn these things. But that does not prove that there is really any "knack" about the matter. It only goes to show that some persons naturally have good taste—an intuitive taste, we may call it—while others must cultivate taste, or acquire it, in order to do successful work at bouquet-making. Most persons who have a good eye for colour and a sense of harmonious proportion may become able, by a little practice, to do creditable work along this line.

The first thing to do is to learn what colours go well together, and the only way to learn this is by experience. You may read about "complementary colours" and all that, but to know all about them you must see them together. There must be an object lesson, in order to get the idea firmly fixed in your mind by the effect harmonious colours have on the eye. Therefore, try all colours together and find out which you can safely use in combination. These experiments will soon convince you that the line cannot be drawn at positive colours. Intermediate shades and modifications of the primary colours must receive quite as much consideration as the primary colours themselves.

Then the principle of contrast must be taken into consideration. There are contrasts *and* contrasts, and not all contrasts are harmonious ones, you will find. Scarlet and yellow afford striking contrast, but not always a harmonious one. Blue and orange are not discordant, and their contrast is very decided, but it is not a pleasant combination by any means, except in rare instances where strong high colours are depended upon to produce certain results which we would not care for under ordinary conditions. In bouquet-making we find (says a writer in "Home and Flowers") that the most satisfactory contrasts are those by which the use of subordinate colour heightens the effect of the predominating colour. We may often secure this result by using two shades of the same colour.

One colour or shade must be subordinate to the other in importance. They cannot have equal value in the combination without detracting from or entirely spoiling the effect aimed at. Suppose, for illustration of the idea, we have some maroon and white Dahlias to arrange. If we have just as many of one colour as of the other, our bouquet will not please us. But if we have but two or three white flowers among a dozen dark ones, the effect is pleasing, because the contrast afforded by the small amount of white used emphasises the darker colour work effectively. We see beauties in it that we would not see if there was no contrast. Reverse the position and let white predominate. The few dark flowers used make the purity and loveliness of the white ones stand out prominently, as it would not if there was nothing to afford contrast. By these contrasts we secure a sort of background, dark or light, as the case may be, against which to display the predominating colour and bring out the full beauty of it. In every arrangement of flowers there should be some such contrast. Sometimes the foliage of the flowers used will supply all that is needed, but generally the flowers themselves should supply it.

As a general thing, we use a great many more flowers than there is any need of in our floral arrangements. We forget or overlook, if we have learned the fact, that strength is not so much in quantity as in quality. An excess of quantity may produce a weak result. The artist, who paints a picture of flowers which you would be glad to hang upon the wall of your parlour, does not crowd his canvas with colour. He depends upon the effective distribution of it and the use of contrast to bring out the decorative idea fully. I have seen pictures which seemed one great glow of colour, and the careless observer would naturally conclude that the luminous effect was secured by the mass of colour used. But analyse the picture and you discovered that the result was secured by a really small amount of colour. A few Roses scattered considerably against a background of green foliage will give the effect of a great wealth of tone, because all the artistic possibilities have been realised by the combination. Try combinations by which this principle is illustrated, and you will be surprised to see what strong and satisfactory effects are secured by the use of a small amount of material. You will learn from it how to "make a little go a long way." And bear in mind the fact that most flowers are most effective when kept by themselves. There may be harmony in colour without harmony in habit. There are very few flowers which do not suffer by being massed with others.



*Cattleya* × *Wavriniana*, Wigan's variety.

One of the most lovely hybrid Orchids we have seen, having the parentage of *C. Warscewiczii* × *C. granulosa*. Sir Frederick Wigan, Bart. (grower, Mr. W. H. Young), of Clare Lawn, East Sheen, Surrey, staged, and received a First Class Certificate for, the variety which he has appended his name to, and which we figure on this page, from a drawing by Mr. Geo. Shayler. The lip is yellowish at the base but deep rich purple in the front and main area; the segments, which are beautifully turned and curvingly formed, are of a salmon-mauve tint.

#### The Week's Cultural Notes.

It is a far cry yet to winter and its troubles relative to Orchid growing, yet a few thoughts apropos are necessary. Everyone with a few years' experience knows how annoying it is to find the leaves falling from fine specimens of the distichous leaved section, such as *Aërides*, *Saccolabium*, *Vanda*, and *Phalaenopsis*, and now is the time to prevent this as far as possible. In nearly all cases it is the badly developed foliage that falls. Plants not properly consolidated are far more likely to suffer than are those with firm, well developed leaves.

This hardening process cannot be carried out all at once, nor can the plants be exposed suddenly to sun and air, as in the case of *Dendrobiums*. They must be grown throughout in a clear light, with plentiful air currents, but screened sufficiently from sun to prevent scorching. The difference between specimens so treated and others rushed on in heat and shade is very marked; the latter not possessing the stamina necessary to carry the plants safely through the checks inseparable from our dull, sunless winters. The grower who at this time of year lowers his blinds early in the morning, and leaves them down until the evening, no matter what the weather, has no chance against those who watch the weather and manipulate the shading accordingly.

I am not advocating a system of running to the blinds every time a cloud passes the sun, but due watchfulness and care are essential. I may be treading on rather dangerous ground in advising anything approaching atmospheric dryness; but I believe, and have proved, that an hour or so of drying about the middle of the day is quite as necessary to the well being of these Orchids as the moisture supplies in the evening. One helps to consolidate the tissues of the plant, while the other helps to replenish the wasted energies of the plant after the heat of the day.

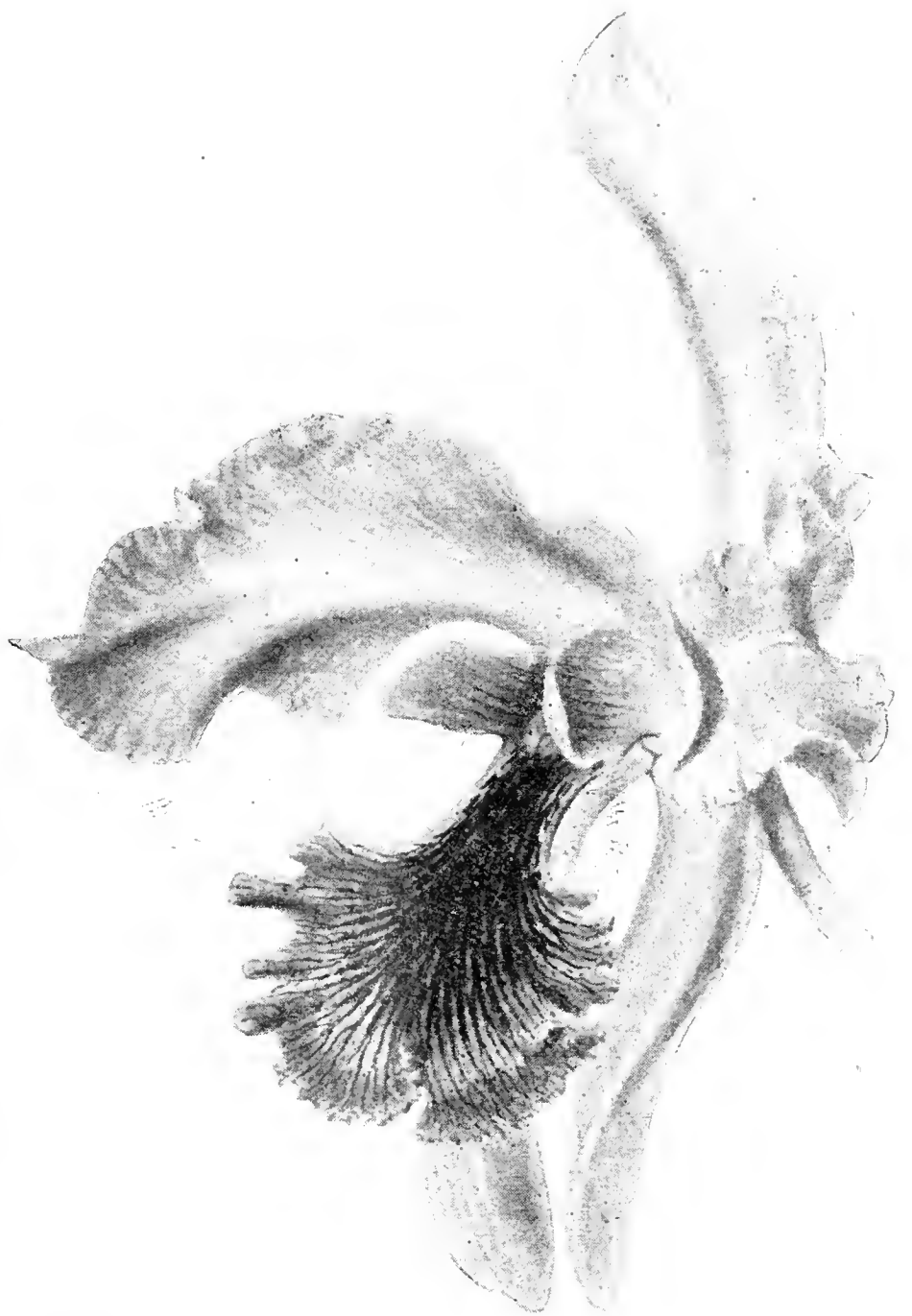
Extremes in either case are to be avoided, and the habits and likings of individual species considered. No one would think of treating a *Phalaenopsis* of the *amabilis* and similar type exactly as they would a stout growing *Aërides odoratum* or *Vanda suavis*. The sensitive foliage of the former would be seriously injured by the amount of sunshine and absence of atmospheric moisture that would be quite right and proper with the latter more bulky plants. On the other hand, it would be wrong to give the heavy syringings and douches of water in the evening to the Moth Orchid that the *Vandas* and *Aërides* delight in. With the *Saccolabium* a middle course would have to be steered, as the foliage is not so sensitive on the one hand as that of the Moth Orchid, or so vigorous as that of the plants with which I have compared them.—H. R. R.

#### Orchids of Commercial Value \*

(Concluded from page 73.)

The flowers of *Cattleya* are, as we all know, large and very beautiful, and especially *C. labiata* gives us an abundance of bloom almost the year round. The first flowers in the late summer and fall are all of the type *labiata*. This flower is always in demand, and ought to be grown more extensively than it is to-day. Next comes *C. Percivaliana*, with a smaller flower than the preceding one. This species comes in just between *C. labiata* and *C. Trianae*, and is therefore well worth growing, but in smaller quantity. *C. Trianae* is one of the most useful, and I think one of the most extensively grown of all the *Cattleyas*. With very little forcing it will bloom from Christmas to the middle of March, or even later, when it will be succeeded by the *C. Gaskelliana*. Next in turn comes *C. Mendeli*, closely followed by *C. Mossiae*. When the two last-

named bloom Orchid flowers do not, as a rule, find as ready a sale, and it is therefore well to grow them in smaller quantities. During the rest of the year, July and the beginning of August, we have the gigantic *C. Warscewiczii* (*gigas*) and the *Eldorado*. It will hereby be seen that it is possible to have *Cattleyas* in bloom during the entire year. With the exception of *C. Eldorado*, which must have more heat and moisture than the others, they can all be grown at a winter temperature of 55deg to 60deg. This may go up to 70deg or a little more in the daytime, but necessitates, of course, ventilation in clear weather. It is necessary to employ two or more houses for this culture,



*Cattleya* × *Wavriniana*, Wigan's variety.

thereby making it possible to force on or hold back certain plants for certain occasions, and also to prolong the blooming period of each species.

The *Dendrobiums* provide us many beautiful species worthy of general culture for the trade. *D. formosum* and *D. Phalaenopsis* are two of the best warm house species. The first named, not unlike a large white *Cattleya*, blooms during the fore part of winter. The other one, with smaller, white, pink, or rose-coloured flowers on long stems in rich profusion, blooms from October to May. It pays well to grow these two varieties in large number. *Dendrobium Wardianum* with its white, yellow, brown, and rose-coloured bunches of flowers, and *Dendrobium nobile*, with rose-coloured blossoms, are two very distinct, useful, and desirable kinds. They need very nearly the same treatment—lots of heat and moisture during the summer, and a cool and dry place during their resting season in winter. Those four are the best and cheapest for commercial purposes, although there are lots of others which may be grown with profit, for instance, *Dendrobium crepidatum*, *crassinode*, *Devonianum*, *densiflorum*, *fimbriatum*, *thyrsiflorum*, and others.

*Vanda coerulea* is very useful for winter cutting, producing long branched flower stalks, with delicate lavender-blue flowers. Because of its colour it is very valuable for commercial purposes,

\* Read by Robt. Karlstrom before the Hartford (Conn.) Florists' Club, January 28, 1902.



it being the only one of that shade. The temperature in the *Cattleya labiata* house is just right for the *Vanda*, which succeeds best if planted in baskets suspended from the roof—thereby also economising in bench room, so well needed for other things.

*Laelias anceps*, *autumnalis*, and *albida*, all Mexican species, are rich flowering saleable sorts, which can to advantage be grown in baskets. They demand a moderate temperature, and therefore succeed well in the coolest part of the *Cattleya* house.

*Cymbidium oburneum* gives a fine white flower of good substance and form, and blooms in rich profusion. No doubt this plant will become very valuable when better known. It has not yet been grown commercially to a very great extent. It wants a moderate, airy temperature, and plenty of moisture about the roots.

*Cœlogyne cristata* is a very fine white flower with a yellow centre. It is said of this Orchid that it has not given full satisfaction. My experience has been that if grown rather cool and not allowed to become too wet it will bloom freely, and its right place is with the *Cypripediums*. It is valuable for table decorations, and keeps, when cut, for a long time.

The *Phalænopsis* family contains several splendid species, all worthy of commercial culture, and pay well when a warm, moist, and in all respects suitable house is provided. *P. Schilleriana*, *P. amabilis* and *P. Stuartiana* are among the best.

*Lycaste Skinneri* is the best of its class, and good for the local market, but easily spoiled in packing. Because of its easy culture it has been called the "amateur's favourite."

*Odontoglossum crispum* gives us the most varieties for the commercial market, and is, therefore, the best. I am sorry to say that this noble species has often been found difficult to handle. It grows well on a very high elevation of the Andes, where the atmosphere is cool and damp, and seldom rises above 60deg Fahrenheit. Thus its natural climate is hard to imitate, and the plants, therefore, suffer from our hot summers. It is clear that a special house should be provided for this species. Face the house north, shade it from the sun, keep it moist with low temperature, and your plants will succeed admirably. *Odontoglossum grande* is another good kind, with very large yellow and brown flowers. The market for this *Odontoglossum* is, as yet, limited to a certain extent, but it is worthy of culture for variety. *Miltonia Roezli* is a very desirable sort, for which good prices are obtained. It wants lots of moisture about the roots, and a warmer temperature than the majority of its relations. The flowers are very large and effective, almost pure white, with purple and yellow towards the bottom.

*Oncidium varicosum* and its varieties are all good fall flowering kinds. The flowers are produced on long overhanging branch shoots, not unlike a gigantic *Adiantum* frond. *O. splendidum* and *tigrinum* are valuable for the late winter months, with their large yellow and brown flowers. They will, like *O. varicosum*, do well together with the *Cattleyas* during their growing period, but want a long rest in a cool house when their flowering period is over.

*Cypripediums* are easier to propagate by division and seeds than most other Orchids. We have at the present time only a few varieties of commercial value. *C. insigne* (one of the best), *C. barbatum*, *C. callosum*, *C. Boxalli*, *C. villosum*, and *C. Lawrenceanum* are among the best. Here is a great field open for the thoughtful and skilful hybridiser, who may be sure of success. This belief is based on results already obtained in hybrids like *C. Harrisianum*, *C. Leeanaum*, *C. superbum*, *C. Morganiae*, *C. Clinkaberryanaum*, and lots of others. Some of these hybrids are costly in themselves, but nevertheless can always be had at a moderate price, and after a few years hundreds of growths may be obtained at little trouble and small outlay.

A noted Orchid expert once exclaimed: "Just fancy a house full of *Cypripedium Morganiae*"—which is a cross between *C. superbiens* and *C. Stonei*. Just think of it, with its long robust stems, each one crowned with three or four indescribably beautiful flowers, and that will give us some idea of what might be accomplished with this more than interesting genus.

Although most of our Orchids, with a very few exceptions, may be grown in almost any greenhouse, it is claimed by Orchid experts that a full span house from the north to the south is best. It should be constructed so that the water from the outside may easily run off, and all drop by condensation during the winter prevented. Three-quarter span houses to the south are sometimes used, but they become too hot, and more ventilation must be given. This, in turn, exhausts the moisture so necessary for successful Orchid culture.

In conclusion, and in this connection, I wish to say to the retail florist: Do always try to keep a few Orchids in a conspicuous place in your store, and show them to your customers, and by having different kinds from time to time, I am sure the public in general will soon become interested, and you will build up a trade equally profitable to yourself, the grower, and the flower-loving public.

## Nature-Study.

A Nature-Study exhibition has been arranged and held in the Royal Botanic Society's garden in Regent's Park, London, since Wednesday, July 23, and continues till Tuesday, the 5th of August. The exhibition was opened by the Duchess of Devonshire, amid a large attendance; among those on the platform being Lord Avebury, Sir J. Hutton, Mr. Hobbouse, M.P., Sir J. Cockburn, Professor Geddes, Professor J. A. Thomson, Mr. Morrell, M.P., and Mr. Medd (hon. secretary).

"The Nature-Study exhibition," (to quote from the Introduction to the official catalogue) "is the first attempt on a large scale to bring together a collection of objects and teaching appliances which will show the present methods of encouraging children to interest themselves in the life of plants, animals, and other living things which they can find in their neighbourhood. Even in the country, and still more in the towns, owing to the varied distractions of modern society, the eyes of children are apt to wander idly and aimlessly over the realm of Nature. The interest which, as local names show, the country people used formerly to take in birds and flowers has for many years been dwindling away. Children have learnt to look upon the outside world as something to be taken for granted, and less worthy of attention than the contents of a shop window."

"This decay of interest in Nature is not only a detriment to the faculty of observation, it is also a defect in general cultivation. A reader of English literature will hardly appreciate its masterpieces unless he has stored his mind with observations of Nature. How else can he understand the numerous illustrations from nature which give such freshness and charm to the pages of English authors, both in prose and verse? Even the student of science who has specialised in some particular branch finds out sooner or later the value of the varied impressions with which his mind has been furnished by early intercourse with nature."

"To revive the lost or vanishing interest in the surroundings of the child's home is the aim of thoughtful parents and teachers both in Europe and America. The aim is not to teach science or to classify knowledge with the view of pursuing any particular branch of scientific inquiry, but to aid the children to look with care and attention at the life which surrounds them. The eye must be early trained to receive correct impressions of common objects by frequent and repeated inspection. Occasional, hasty, and indiscriminate glances are of little avail, neither awakening interest nor leading to precise observation."

"Nature in this aspect is not divided into separate and isolated compartments of study, but, on the contrary, each object is considered as a part of all nature, and special attention is directed to the dependence of each part upon others. For this reason many authorities are anxious to cancel the use of the word science in connection with Nature-Study, not because there is any room for careless or inexact treatment of these simple observations; but because, while the aim of science is knowledge of a special branch, the purpose of Nature-Study is to awaken the interest of children in a world outside themselves, and to help them better to understand their own place in nature and the conditions of healthy life."

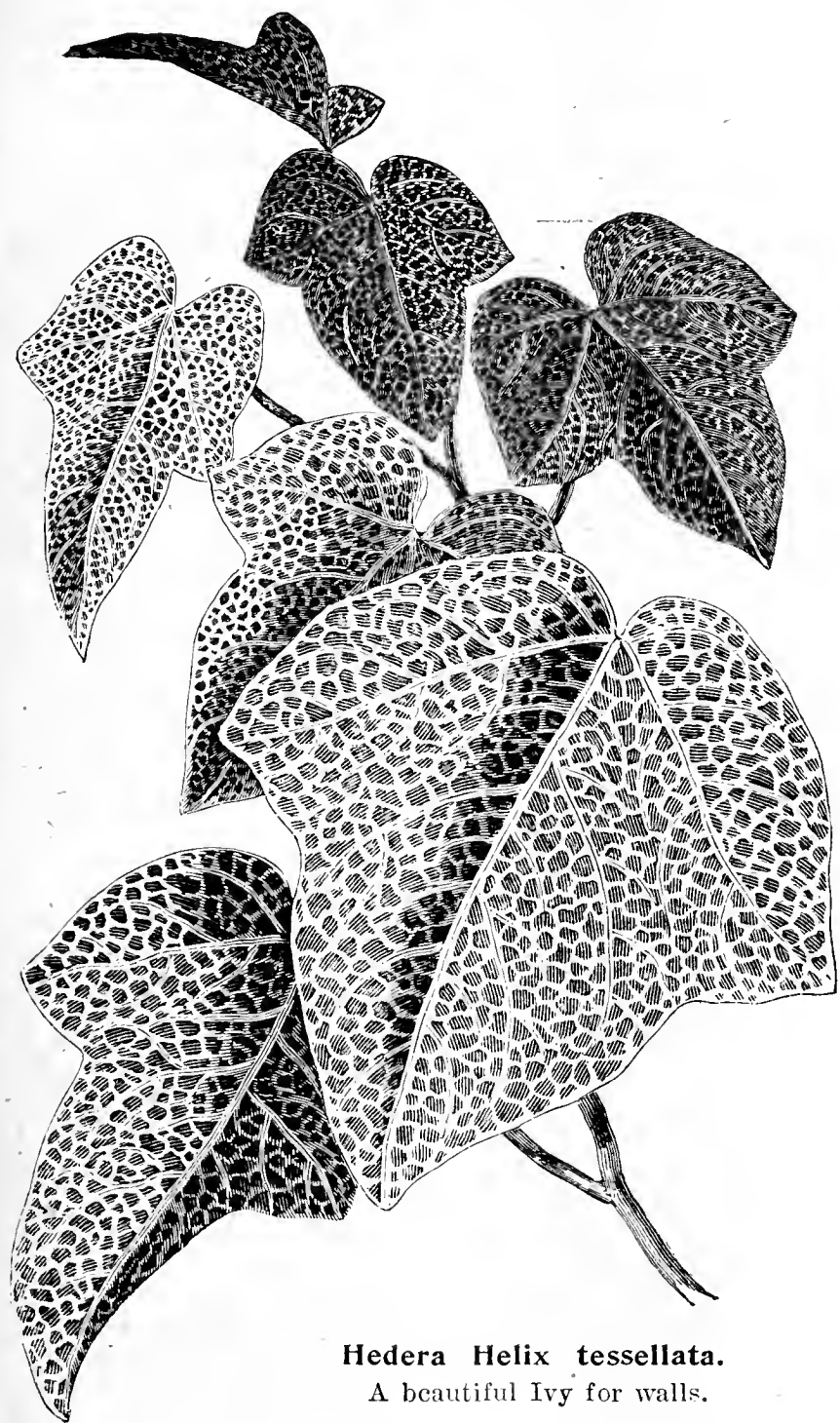
"Although Nature-Study is no new discovery of the present time, the progress of science has suggested to the teachers of it many new methods of instruction. Those who desire to see for themselves what progress has been recently made in this branch of school work will find in the Nature-Study exhibition an unexampled opportunity. Teachers have met the invitation to contribute specimens of their studies in nature with a readiness for which the committee have reason to be deeply grateful. The exhibition includes examples from all types of educational institutions in Great Britain, and also the Colonies and the United States."

Since the opening of the exhibition (notes of which we append) a Conference has engaged the attention of a number of leading educationists, eminent naturalists, and the heads of rural schools and colleges. At the first day's Conference on July 24, the Right Hon. R. W. Hanbury, M.P., President of the Board of Agriculture, presided, and Lord Avebury read a paper on

### "The Study of Nature."

We lived, he said, in a beautiful world which it was fatal to misunderstand. We had all met persons with a university degree who thought that corals were insects, whales fish, and bats birds, and still believed that the world is less than six thousand years old. University authorities seemed to consider that the elements of science were in themselves useless, yet it was important to know the rudiment of all sciences, and it was in reality impossible to go far in any one without knowing something of several others, and so far as children were concerned it was a mistake to think of astronomy and physics, geology and biology, as so many separate subjects. For the child nature was one subject, and the first thing was to lay a broad foundation. Specialisation should not begin before sixteen at any rate. He would then submit

that some study of nature was an essential part of a complete education. In the study of natural history we should proceed from the general to the particular; collection should be encouraged, but it was only a means to an end, not an end in itself. It was like a library, necessary for study, but useless unless studied. If pets were kept, they, too, should be observed. Then as to plants, how many problems were opened up by flowers, leaves, and seeds? There must be causes for the different forms of leaves. What were they? The late Lord Derby used to say that considering the marvellous discoveries of the last hundred years we could not expect so much in the future. With our improved instruments he expected more, as we had, moreover, more students, and the opportunities for research had become



*Hedera Helix tessellata.*

A beautiful Ivy for walls.

more numerous. Everything is full of interest to those who had eyes to see. In the troubles and sorrows of life science could, and would, do much to soothe, comfort, and console.

#### County Council Action.

Mr. H. Hobhouse, M.P., spoke on the question of "How the County Councils may encourage Nature-Study." The best work they could do was in the training of the teachers. He pointed out that twenty-two County Councils conducted short special courses for teachers, extending over a few weeks in the summer; twenty-four had instituted longer and more systematic courses; twenty-six had arranged in connection with these courses outdoor rambles; twenty-five had courses in horticulture, twenty in botany, twenty in natural history, fourteen in plant life, nine in entomology, and seven in zoology. In almost every case the instruction was given at agricultural colleges or in central positions. A great deal more would have to be done and peripatetic teachers might be provided. School gardens and museums should be organised. Apart from the general educational value of Nature-Study there were certain practical ends which might be kept in view, such as the protection of wild birds. Great ignorance prevailed as to the appearance, names,

and habits of birds even in rural districts, and classes could be held at convenient centres, to which he added, with a smile, "farmers and gamekeepers might be specially invited." No less practical ends were the prevention of the diseases of animals, the protection of trees and garden plants from injurious insects, the effects of different soils and manures on various grasses, and the habits of bees and poultry. Other papers on the same (first) day were read by Professor J. A. Thomson (Marischal College, Aberdeen) on "Seasonal Studies in Natural History"; and by Mr. H. Coates on "Local Museums as Aids to the Teaching of Nature Knowledge."

#### Nature-Study in Elementary Education.

On Friday, July 25, Lord Strathcona presided at the second Conference. In Canada, he said, they were fortunate in having a gentleman who was greatly interested in and had done much for education. He referred to Sir W. Macdonald, who had given not less than £750,000 for the promotion of education. Not content with giving that large sum, when he came to understand the wants of the rural districts, Sir W. Macdonald gave further generous amounts for the purpose of Nature-Study. In that he had associated with him Professor Robertson, the Dominion Commissioner of Agriculture. In educational matters we had been going too much in the old grooves and not doing enough to lead the youth of the country to study the things that lay around them. Lord Strathcona went on to speak of the great progress in Canadian agriculture owing to the education now given on that subject.

Professor C. Lloyd Morgan, Principal of the University College, Bristol, delivered an address on "Nature-Study in Elementary Education." Their object, he said, was general, and not special. It was, as Sir George Kekewich stated, the opening of a field for the exercise of the brain and the eye, and it developed a love of nature and an interest in living things. Teachers could do much in this direction, but he warned them of the danger of endeavouring to inculcate general laws and principles which were beyond the capacity of a child.

Mrs. Franklin, hon. secretary of the Parents' National Educational Union, read a paper entitled, "How to Bring Children into Touch with Nature." "Nature-Study in Urban Schools," by Mr. H. Major, inspector to the Leicester School Board; "The Teacher as an Observer," by Miss Mary Simpson, Yorkshire College, Leeds; and "Trees as a Means of Nature-Study," by Mr. John Evans, one of His Majesty's sub-inspectors, were the titles and readers of subsequent papers. On the motion of Sir Joshua Fitch a vote of thanks was passed to the readers of the papers.

We herewith print the programme for the three concluding sittings:—Tuesday, July 29. Chairman: The Lord Balfour of Burleigh, K.T., Secretary for Scotland. Address on "Visual Instruction" (illustrated), by Prof. Bickmore, Natural History Museum, New York. Selected speakers: "Nature Study in Relation to Rural Pursuits," Mr. G. Herbert Morrell, M.P.; "The Proper Attitude of the Teacher," Mr. A. D. Hall, Principal, S.E. Agricultural College, Wye, Kent; "Nature-Study in Elementary Schools from the Teacher's Standpoint," Mr. G. H. Rose, Head Master, Caterham Board School.

Thursday, July 31. Chairman: Sir George Kekewich, K.C.B., Secretary to the Board of Education. Address on "Nature-Study in Colleges and Higher Schools," by Prof. Miall, F.R.S. Selected speakers: "Nature-Study in Girls' Secondary Schools," Miss Mary Gurney, Member of the Council of the Girls Public Day School Company; "Plant Life as Nature-Study," Mr. Scott Elliott, West of Scotland Technical College, Glasgow; "School Gardens," Mr. T. G. Rooper, H.M.I.; "Geology as a Branch of Nature-Study," Prof. Grenville Cole, Royal College of Science, Dublin.

Friday, August 1. Chairman: The Right Hon. Sir W. Hart-Dyke, Bart., M.P. Address on "The Training of Teachers in 'Nature-Study,'" by the Rev. Canon Steward, Principal, The Training College, Salisbury. Selected speakers: "The Relation of Nature-Study to School Work and to the Home," Sir Joshua Fitch, LL.D.; "Nature-Study as an Element of Culture," Mr. M. E. Sadler, Director of Special Enquiries to the Board of Education; "School Rambles and the Training of Teachers," Mr. J. H. Cowham, The Training College, Westminster, S.W.; "The Present Work of the County Councils," Mr. H. Macan, Secretary, Surrey Education Committee.

#### The Exhibition.

The official catalogue of the exhibition extends to seventy-four pages, which may help to convey an impression of the variety and numbers of contributions which have been sent. The exhibits occupy all the available space in the great conservatory, and they further line each side of the long corridor in the Botanic Gardens. Of a mixed nature, all are interesting and instructive. Teachers are there with their note-books; students admire or criticise each other's work; elderly ladies and gentlemen with children go round and find the natural history objects as interest-



ing as a play, and everyone seems satisfied at the success of the new movement.

The Nature-Study Association have brought together many scores of peoples, schools, and societies all with kindred aims and sympathies; it has shown to everybody what everybody else is doing; it has shed through this exhibition many a new idea and many a new plan to teachers and learners, and may very possibly have inspired as many others to make a far fuller use of their time and opportunities. One of the finest features, too, is the presence at the exhibition of publishing firms and trading naturalists who are supplying literature in the one case, and naturalistic specimens for study in the latter instance. We trust their good work in the two sections may be duly rewarded.

The exhibition is divided into groups, Group A, for instance, being devoted to contributions from agricultural and horticultural colleges and schools, experimental farms, agricultural departments of universities and university colleges, and similar institutions. Under Group A the various entries are enumerated. Thus: 1. Board of Education, Whitehall, leaflets and circulars; 2. Board of Agriculture, Whitehall, leaflets on birds, insects, plants; 3. The Yorkshire College, Leeds, which has a large number of objects; and then follow the various other colleges with their displays.

In the horticulture section one finds an interesting group which comprises the parent species of Roses, Carnations, Pinks, and Begonias, backed by their highly developed descendants known to gardeners in the present day. The children's garden plans and diaries are of interest, and show the course of the theoretical and practical instruction given by the County Council lecturers. In the conservatory there are collections of seeds and seed-vessels, shown in pigeon-holed boxes, and many hundreds of dried collections of plants, also drawings of flowers, leaves, stems, and seeds. Many of them are coloured, and most of them are exceedingly well executed. Photographs of children working in the school gardens, and of Nature-Study parties out in the fields and woods, form quite a feature everywhere.

The more elaborate and meritorious exhibits are those of masters and their assistants in the colleges, where model geographical sections of districts, showing the hill-ranges, the streams, the valleys, and all other features to scale, are displayed. In some of the maps the flora and fauna of these islands are shown along with the physical features.

Dried collections of grasses, useful and useless, form yet another feature, and there is ocular demonstration on testing the amount of transpiration in leaves, also on root pressure and assimilation (showing the principle of osmosis), not omitting experiments in growing and feeding plants with and without certain chemical manures. A germinating box with glass sides showed the sprouting methods of a number of different seeds, and a small specimen tree which showed six methods of grafting could not fail to be generally instructive. Prizes and certificates were awarded for plans of gardens, and some splendid work was on view. Add to these, the collections of moths, butterflies, birds' eggs, British reptiles, birds, and hives of bees at work, and it must be conceded that a most successful exhibition has resulted. Thirteen medals and sixty certificates were awarded.

## Birmingham Gardeners' Outing.

The annual outing took place on the 16th inst., and was attended by about sixty of the members and lady friends, the venue being Rangemore Hall, the seat of Lord Burton, near Burton-on-Trent. The weather was all that could be desired. Arriving at Burton about ten o'clock on the Midland Railway, the party was at once conveyed to Rangemore by Bass's Brewery vehicles, specially apportioned for outings. The six miles' drive was much enjoyed, through chiefly Oak-treed pasture land, bearing heavy crops of hay, and the Thorn hedges and bushes charmingly bedizened with Dog Roses and Woodbine in wild profusion. Arriving at the prettily flower-gardened village of Rangemore, a visit to the comparatively small church, a special object contained in it being the identical plain bench-like seat occupied by His Majesty King Edward VII. when visiting Lord Burton in February last. The party then proceeded through the adjacent entrance to the gardens, amidst a multiplicity of flourishing specimens of such as Wellingtonias, Cedars, and other Conifers, Hollies, &c. As Mr. Bennett, the head gardener, was unavoidably absent, his two foremen, Messrs. Culwick and Jennings, were deputed to conduct the visitors through the extensive ranges of fruit and plant structures. The crop of fruit evidenced high cultured skill, as also the plant department; and notable, too, were the hedges of *Rosa rugosa* and climbing Roses.

Tree Carnations were a feature, and are the favourite flower of Lord and Lady Burton. After having perambulated the extensive pleasure grounds an inspection of the principal rooms inside the imposing mansion was much appreciated, and rendered

additionally so by virtue of the King's visit. Returning to Burton, the party, after partaking of a substantial luncheon, visited the famous Bass and Co.'s Breweries, and were conducted by the chief brewers and other officials through some of the various departments. The processes of cork-making were highly interesting, and the now famous mash-tub used by the King was of course an object of lively interest, and the process of washing was minutely described by Mr. Sullivan, the brewer-in-chief, and who had the honour of instructing the King in manipulating the machinery thereof. The visitors were also conveyed by the firm's private train and line to the ale vaults, upwards of a mile distant, and were shown the two cellars containing the vast numbers of casks containing "the King" brew. Though not actually admitted, they were yet seen through the strongly bolted open-barred doors. The visit was concluded by the train extending the tour through the miles of lines connected with other breweries, besides the network of Bass's. Tea was served at one of the hotels, when Professor W. Hillhouse, Birmingham University (the president of the association) proposed that a hearty expression of thanks be conveyed to Lord Burton for the kind privilege granted the party, seconded by Mr. John Pope.

## Disease in *Lilium giganteum*.

We offer the following in answer to "J. P.," who sent decayed bulbs of this handsome Lily.

The stem-root portion was completely rotted, and the roots quite dead. There was nothing observable to the naked eye or even a pocket lens but a few animal organisms, or so-called insects, that are usually associated with decaying vegetable matter. On placing a bit of the decayed root-stem under the microscope, it was found swarming with eelworm in all stages from the so-called egg-sacs, larvæ, encyst, up to perfect form. It appears a species of eelworm closely allied to root-knot eelworm, *Heterodera radicola*, but the mouth cavity appears destitute of the very fine, sharp protrusive boring dart possessed by *H. radicola*, and the ova are not enclosed in the body of the female parent, the cyst, or egg-sac, but scattered irregularly through the tissues of the root, hence cannot be derived from the pear-shaped bodies and motionless forms of pregnant root-knot eelworm.

The eelworm, therefore, found in your *Lilium giganteum* root-stem belongs to a species, the adult females of which are wandering freely within the root, depositing their eggs gradually as they wander about. The larvæ also differ in size and shape from those of *H. radicola*, being short and blunt-tail ended, very closely resembling the root-stem eelworm, *Tylenchus obtusus*. It is the same species evidently that sometimes attacks Banana root-stems, and may occasionally be found in the root-stems of Bamboos.

The eelworm, certainly an unnamed, if not unknown species, has probably found a most suitable host in the root-stems of some monocotyledonous plants, found only so far on those of Bamboos, Bananas, and *Liliums*, yours, as regards the latter, being the first recorded instance, and in this case it was probably introduced along with the bulb or roots. Probably the best treatment would be that of dressing the land some time in advance of planting with basic cinder phosphate, 2lb per square yard, and  $\frac{1}{2}$ lb kainit as advised for root-knot eelworm by Mr. W. Dyke, in *The Journal of Horticulture*, mixing well with the soil and stirring well before planting.

In the case of infested plants, perhaps a mixture of eight parts basic cinder phosphate and three parts kainit, mixed, applying  $\frac{1}{2}$ lb of the mixture per square yard, would have a good effect, it being sprinkled on the surface about the plant, lightly pointing in and afterwards watering, as usual. To encourage growth, a light dressing of nitrate of soda would probably be advantageous, applying 1oz per square yard.

## The Grand Vizier of Uganda at Sutton's.

His Excellency the Katikero (Prime Minister of Uganda), accompanied by his secretary and the Rev. Ernest Millar, who acted as interpreter, visited Reading on the 21st inst. The party was met at the station by the Deputy Mayor and Town Clerk, and subsequently the party were driven to Messrs. Sutton's Trial Grounds, where they were much interested in flowers and vegetables, many of which varieties are now in use in Uganda; and after signing their names in Messrs. Sutton's visitors' book, they attended a luncheon given in their honour by Mr. and Mrs. Martin Sutton in the Abbey Hall, to which a large number of leading members of the Church Missionary Society were invited. After the loyal toasts, the Prime Minister, in a long and most interesting speech, gave an account of the introduction of the Gospel into Uganda as a result of Stanley's first visit, and the subsequent efforts of Mackay and others.



### H.P. Rose Gustave Piganeau.

Either as a bedding Rose or as an exhibition variety, the above has special merits that deserve to be appreciated. In his chapter on "Manners and Customs," Mr. Foster-Melliar in "The Book of the Rose," says it is "Very short in growth, which is nearly the only fault of this very fine Rose. The foliage is good, and the plump fat buds above it open into very large, brilliant, grandly shaped blooms, with broad stout petals, and beautiful centre. Very little liable to mildew, and not much injured by rain. It was a great disappointment when this splendid Rose proved to be a poor grower. Moreover, the plant is not lasting in vigour, but often gets weaker, and is best as a maiden, either on Briar or Manetti. It is very free-flowering, which seems to be a cause of its weakness of growth; it will not make wood, but is constantly forming buds. A good autumnal, capital for forcing, and a large, lasting, reliable exhibition Rose of the first rank." On page 111 we illustrate a typical flower of Gustave Piganeau.

### Wm. Paul & Son's Rose Exhibition.

Away from the dust and the heat of the streets, yet still close to the centre of the metropolis, one could not have imagined a greater luxury during the sun-lit days of a week ago, than to sit and gaze upon the Roses sent by this Waltham Cross firm to form an exhibition for four whole days in Regent's Park. Here were trees for shade, Roses to gladden the eyes, and their fragrance for the air. Ben Greet's Pastoral Players supplied sweet music from the shrubberies.

The Rose tent was large, about 10 yards long and wide, and it betokens the resources of Messrs. William Paul and Son's nurseries, that they should have been able to supply fresh flowers during their occupation there.

The new Frau (can we not call this Mrs. ?)—Frau Carl Druschki, the noble white H.P., was splendidly shown as a pot plant, and seems to have a similar erect habit to Mrs. John Laing. Messrs. Paul's notes on this new comer on page 57 of this journal, must have been read with interest.

Their beautiful Corallina was also displayed, and will become more and more welcome as a decorative bedding Rose. It is of a deep rosy crimson or coral hue, specially beautiful when cut fresh in the bud state, in which condition we know of no Rose to surpass it for bowls or glasses. It is a capital bedding Rose, and blooms freely right into the autumn.

Tennyson, the new Hybrid Tea, was naturally well to the front, and seemed to last through the heat better than a great many of its associates. This Rose is remarkably robust for an H.T., and came, I believe, as a seedling from White Lady. The colour, however, is pale silvery-pink, and the well-formed flowers are very large and prominent. As an exhibition Rose it has promises, and as it becomes longer tried its qualities or failings will assert themselves. The parent of it was excellently shown, and the form of the flowers was perfect. The delicate flesh-tint in the centre of the flowers is very sweet to look upon.

H.P. Violette Bowyer attracted my attention on account of its merits, and also because one so very rarely sees it staged. It is a vigorous Rose which often arrives in a state for showing, and also furnishes a variety for forcing. The colour is white, flushed with pale mauve or flesh-tone. H.T. Viscountess Folkestone naturally found a place, and well deserved it, for it is a first-rate old favourite, and one of the best Bennett ever raised.

Liberty (H.T.) was shown in baskets as a decorative Rose, but as time goes on we begin to see what a splendid exhibition flower it has in hot dry weather. Then it opens strongly with superb form, and large in size, the colour too, of great depth.

Killarney, another H.T., was here of that smooth form which is so great a feature of it. The wonderfully delicate tints of it—pink with a suspicion of lavender or lilac—are very pleasing, and when cut in the half-opened state, Killarney furnishes a strong bloom in any exhibition stand. Beyond that, however, the stamens in the centre become prominent, and it is relegated with "decorative" sorts. In this section it has a great future, and as such, it is here recommended.

Sunset, with lovely clusters of apricot-coloured blossoms, adds another to the decoration class, and it is a vigorous Rose. It resulted as a sport from Perle des Jardins.

Among H.P.'s we still have few exhibition or border Roses that surpass Pride of Waltham, which was sent out twenty-one years ago. The flowers are large and full, and much prized for their delicate flesh-colour shaded with bright rose—a clear and

distinct flower. No less it is noted for the vigour and hardiness of its constitution. In Scottish gardens it is much appreciated.

A new bedding Noisette named Floribunda could not be overlooked, its white and Apple-blossom tinted clusters of flowers being as fair and beautiful as the best. These are also of goodly size and fine shape, freely profused. In the new Sulphurea, sent out only last year, a "yellow" Rose is added to the short list in this welcome colour. The flowers are a true primrose colour; and as a bedding sort it has been described as "a fine thing."

Beside it was Corona, yet another novelty in H.T.'s with regularly formed flowers, of a rich rose-pink like the blossoms of Rivers Early Peach. It fades to a pearly white when fully expanded.

Clio gives a deeper toned Hybrid Perpetual Rose which the Journal has already described as a "sterling novelty," and our longer acquaintance with the variety confirms an earlier judgment. As an all-round and vigorous growing variety Clio is of a beautiful flesh-colour, a colour always admired, and the fine globular form is only another of many merits. It was splendidly staged at Regent's Park.

While one might go on choosing and describing others of tried quality, sufficient has been already noticed to convey an idea of the exhibition in regard to its novelties; and when we add to these specimen plants in pots of Crimson Rambler and the new climbing Leuchstern (Bright Star) with its pink and white Hawthorn-like clusters, together with delightful trusses of the species and other garden Roses, it will be conceded that a fine collection was arranged. Many of the best Roses, better known than those now named, were on view, and Bougainvilleas in pots occupied the top central position in the tent. In recognition of Messrs. W. Paul's efforts, a large New Gold Medal was awarded to them.—J. H. D.

## English Dahlias.

The following excellent paper by Mr. T. Pockett, on Dahlias exhibited in England, as seen by him during his recent visit to the Old Country, appeared in the "Weekly Times," Melbourne, of February 16, 1902:—

There have been a number of papers written about Dahlias during the last few years, more especially the Cactus types, in which their origin has been fully explained, so I will not attempt to write about the history. It may be as well, however, to say that the present popular kinds are nearly all raised in England. I had, on several occasions, opportunities to have a chat with the most successful raisers and distributors of this beautiful type, and I must admit that the varieties of the last two years' introductions are a decided advance upon those of previous years.

The first show I visited where Dahlias were well represented was at Shrewsbury. Everything appeared to be well represented there, as it is acknowledged to be the largest flower show in the kingdom. Perhaps the best show for Dahlia enthusiasts was the Dahlia Show at the Aquarium on September 17. This contained all kinds of Dahlias, including Cactus, Show, Fancy, Pompons, and also Anemone-flowered varieties. They were undoubtedly a very fine lot, and apart from those shown for competition there were also some wonderfully fine exhibits set up by the various trade growers. I could not have believed that the trade would have put so much time, energy, and forethought into their exhibits had I not seen them myself. I will deal more with the trade exhibits after I have given you some idea of the competitive exhibits.

In the first place, the showing of single blooms on boards is, I am happy to say, being done away with, and other plans adopted, such as showing varieties in bunches of three, six, ten, or showing in vases, glasses, &c. A number of Cactus varieties are shown in bunches of six, so also are the singles; but the pompons are usually shown in bunches of ten. Having wires with the loops properly spaced for the required number of blooms, there is really no difficulty in arranging them. No one who saw Dahlias set up in bunches in this manner would advocate the boards again for Cactus, pompons, or single varieties, but the boards may still be used for the large blooms of the Show and Fancy varieties of the formal types.

The Cactus forms were evidently of the greatest interest, although all the various forms were well represented. Size was not evidently regarded, when judging of merit, and I don't know that any particular form was aimed at, as long as the flower represented was what is known as the true Cactus Dahlia, which must be a flower composed of petals either incurved or claw-shaped. They may be straight, but I am inclined to think that those somewhat claw-like were mostly favoured, so long as the petals were sufficiently tabulated or tubular so that the flat surface was not exposed to view. Varieties that appeared to show the type required were Lyric, Rosine, Imperator, Clio, and Lacio. Another type that is evidently appreciated is the



rather narrow, but nearly straight petalled variety, represented by one of the older varieties, such as Chas. Woodbridge, and also the newer varieties, such as J. W. Wilkinson and Mrs. J. J. Crowe. The blooms set up averaged 6in or 6½in in diameter, and were very uniform in size.

In the twenty-four single blooms, such varieties as Rosine, Loyalty, Innovation, Uncle Tom, Columbia, Mrs. J. J. Crowe, John Burn, Lord Roberts, J. W. Wilkinson were staged. The Clown (a broad petal variety), Arab, Mrs. Weir Fife, Mrs. Carter Page, W. Treseder, Imperator, Lyric, Ajax, Artus, Cornucopia, Clarence, Webb, &c., were also shown. In the twelve, the best were Rosine, Mrs. C. Page, and J. W. Wilkinson. In the six, Ajax and Innovation were the best.

A very nice exhibit was the twelve varieties in bunches of six of each bloom, was drawn through a wire loop, and contained a fair proportion of new ones, such as Spitfire, Gabriel, Ringdove, with Lyric, J. W. Wilkinson, and Richard Dean. In the nine varieties, set up in three of each variety, there were fine blooms of J. W. Wilkinson, Rosine, Mayor Tuppeney, Lord Roberts, Uncle Tom, Mrs. J. J. Crowe, Neviators, Sherbrooke, Loyalty, and Chas. Woodbridge. Other good varieties in this competition were Ethel, J. F. Hudson, Mrs. J. Goddard, Zephyr, Mrs. Carter Page, Jealousy, Mr. Jowett, and Red Rover.

Amongst the new Cactus varieties not mentioned in the above that I noted as being good were H. J. Jones, J. H. Jackson, Sailor Prince, Mrs. Allcraft (the two last I noticed in the exhibit of "Hobbies," Limited).

The Show and Fancy Dahlias were very large, but somewhat wanting in build, as they were in many instances a bit too low in the centre. A very good representative lot was shown in the first twenty-four. They were Purple Prince, New Cannin, F. D. Girdlestone, Daniel Cornish, Wm. Powell, Rebecca, Florence Tranter, Matthew Campbell, Wm. Rawlings, Frank Pierce, Shirley Hibberd, Emin Pasha, Majestic, Muriel Hobbs, Harry Veitch, James Cocker, John Hickling, Geo. Rawlings, Kabreteen, Marjorie, W. Veitch, Mrs. Gladstone, A. Rawlings. Other good varieties were James Vick, J. B. Service, Maud Fellowes, J. T. West, R. T. Rawlings. The best twelve of Mrs. Tranter were the following:—Miss Cannell, Arthur Rawlings, Geo. Rawlings, R. T. Rawlings, J. R. Tranter, W. Powell, John Standish, Shottesham Hero, Henry Beith, Florence Tranter, David Johnson. The singles were very fine, and well set up. The twelve varieties were:—Eclipse, Peacock, Beauty of Lye, Frogmore, Aurora, Victoria, Donald, Casilda, Naomi Tyler, Alice Searle, Columbine, Yellow Ring, Puck. The six contained much the same as the best of those mentioned above. Among pompons in bunches of ten a good representative twelve were Hypatia, Douglas, Snowflake, Galatea, Ganymede, Bacchus, Daisy, Nerissa. Other good ones in the six were Tommy Keith, Ganymede, Darkest of All, and Adelaide.

No doubt one of the finest exhibits in the show was that staged by "Hobbies," Limited. This exhibit covered a table about 60ft long, and about 7ft or 8ft in width. The background was composed of Dahlias and Palms. In front were pyramidal groups and vases, about 4ft or 5ft high, with Cocos Weddelliana and Adiantum. There was also a nice plant of C. Weddelliana placed at the back of each pyramid, while the front was composed of blooms in small glasses. The pyramids were filled with the most telling of the newer varieties. One was filled with Rosine. Another Floradora (same type, but dark), while Artus, Flamingo, J. Weir Fife, Lyric, Prince of Yellows, Innovation, and J. W. Wilkinson were used, each variety representing the pyramid, and, with the addition of the usual varieties, it was the finest exhibit I had seen.

Messrs. H. Cannell and Sons had a wonderfully fine lot, but the exhibit generally was rather formal. The table was 30ft by 6ft, the flowers of Cactus varieties were run in lines. The back line was well raised, and was set up in sprays or bunches of twelve. The next line contained tens; while the third was composed of sixes. This was a mass of colour, rising from 3ft to about 9ft in the centre. The most noticeable varieties were Major Weston, Ajax, J. W. Wilkinson, Lovely, Eynsford, Cannell's Crest, The Clown, Monarch, Progenitor, Sherbourne, and Red Rover. There was a number of other very fine exhibits set up by Messrs. Burrell and Co. There was a large collection of Gladioli at one side of table, Roses at the end of table, and a miscellaneous collection of flowers on the opposite side. Messrs. Dobbie and Co. had a large collection consisting mostly of Cactus and pompons, Red Rover, Ajax, Mrs. Carter Page, J. W. Wilkinson, Imperator, and Wm. Treseder. J. Surman had a nice table of popular varieties of Cactus and pompons, but although effective, the flowers were rather small. Messrs. H. J. Jones, Cutbush and Son, Jones and Sons, and others also contributed.

In the competition for six blooms of one variety, the prize went to a variety, Gaillard, although Ajax and Mrs. J. J. Crowe were very fine. Amongst seedlings and others not previously mentioned, I noticed very fine blooms of Mrs. J. Bishop (very large, but coarse), Spotless Queen, Cannell's Nest, and Mrs. G. H. Mawley (a yellow classed). There was a small showy table by J. Walker, which contained fine Show and Fancy Dahlias.



*Dendromecon rigidum.*

## *Dendromecon rigidum.*

This is a Californian plant, a native of the dry rocky ranges from San Diego to Clear Lake, and found most abundantly south of Point Conception, and on Santa Rosa Island. The flowers are yellow, with all the characters and intensity of colour of a true Poppy. They are terminal on the numerous twiggy branches produced by the straw-coloured older wood. It grows from about 3ft to 8ft in height, with leaves of a bluish colour from 2in to 3in long. The two very concave sepals, like those in most flowers which are members of the Papaveraceæ, fall

after the opening of the flower, which spreads widely in the early hours of the day, but assume a more cup-like form after noon. The two forms are given in our engraving. The plant is perfectly hardy in England, but somewhat difficult to get to succeed. Discovered in California by Mr. David Douglas, it was first grown from seed sent by Mr. W. Lobb to Messrs. Veitch and Sons, Limited, of Chelsea. It is somewhat variable in the character of its leaves, and is undoubtedly a handsome plant when well grown; a valuable feature being the length of time during which flowers are produced. At the present time, after many years since it first came to us, there are only a few plants known to exist in England. The engraving has been prepared from a sketch made at Kew, where a fine plant is growing on the west wall of the Cattleya house.

## *Polypodium Schneideri.*

Hybrid Ferns are uncommon, and when a hybrid arises it is not generally safe to say what the parents are. But in the fine Fern here illustrated, which bears the name of a distinguished practical pteridologist, the parents are authentically given as *P. aureum* and *P. vulgare elegantissimum*, and the seedling offspring shows a manifest blending of the characters of both species. *Polypodium Schneideri* has the hairy rhizome of *P. aureum*; but the leafy portion of the fronds more closely resembles that of *P. vulgare elegantissimum*, and is as finely cut, though they bear traces of the glaucousness of *P. aureum*. When full-grown, the plant presents a bold aspect with a rather dense habit. The fronds attain a length of 3ft. The pinnules are narrowly oblong, with a deeply sinuate margin, and are gently undulated. It was raised at Chelsea by Mr. Geo. Schneider, when Messrs. Veitch had their collection of exotic Ferns there.

## Gadding and Gathering.

"HERE AWA', THERE AWA'."

### The National Chrysanthemum Society's Outing.

The members of the leading floricultural society of the United Kingdom, as Richard Dean, its secretary, likes to call it, arrange an annual picnic and visit to some prominent place of interest. Yesterday week, accompanied by lady friends, and numbering over 100, they joined in a trip to Sir Wheetman Pearson's beautiful gardens and estate of Paddockhurst, near Three Bridges in Sussex. The rain which fell during the morning in London must have damped more than the ground and the umbrellas; but one often finds that, metaphorically, while London weeps the surrounding country smiles, and it was so on the Wednesday.

Leaving Victoria Station just after ten in the morning, Three Bridges was reached an hour later, and from there to Paddockhurst the conveyances were brakes, through perhaps the most sylvan parts of this southern county. Tall and straight Larch trees, varied here and there by Oaks, Beech, and Elm, commanded the attention of everyone. And as for Ferns—the common Bracken—why they grow 7ft high! Nor must one forget the brilliant banks of Heather, not the Ling, but Erica Tetralix, which absolutely monopolises every foot of surface not already occupied by its handsome companion Pteris aquilina. The dew drops had not yet been dissipated as the party drove upward in the morning; but the stillness of the beautiful gloaming had stolen down on us in our home-going, the red setting sun illuminating with weird irradiance the depths of the forests as our vision searched backward to their depths. Why did the sun set in the east? For we from the metropolis thought it so, which goes to prove what changes are brought about in a journey of but a few miles.

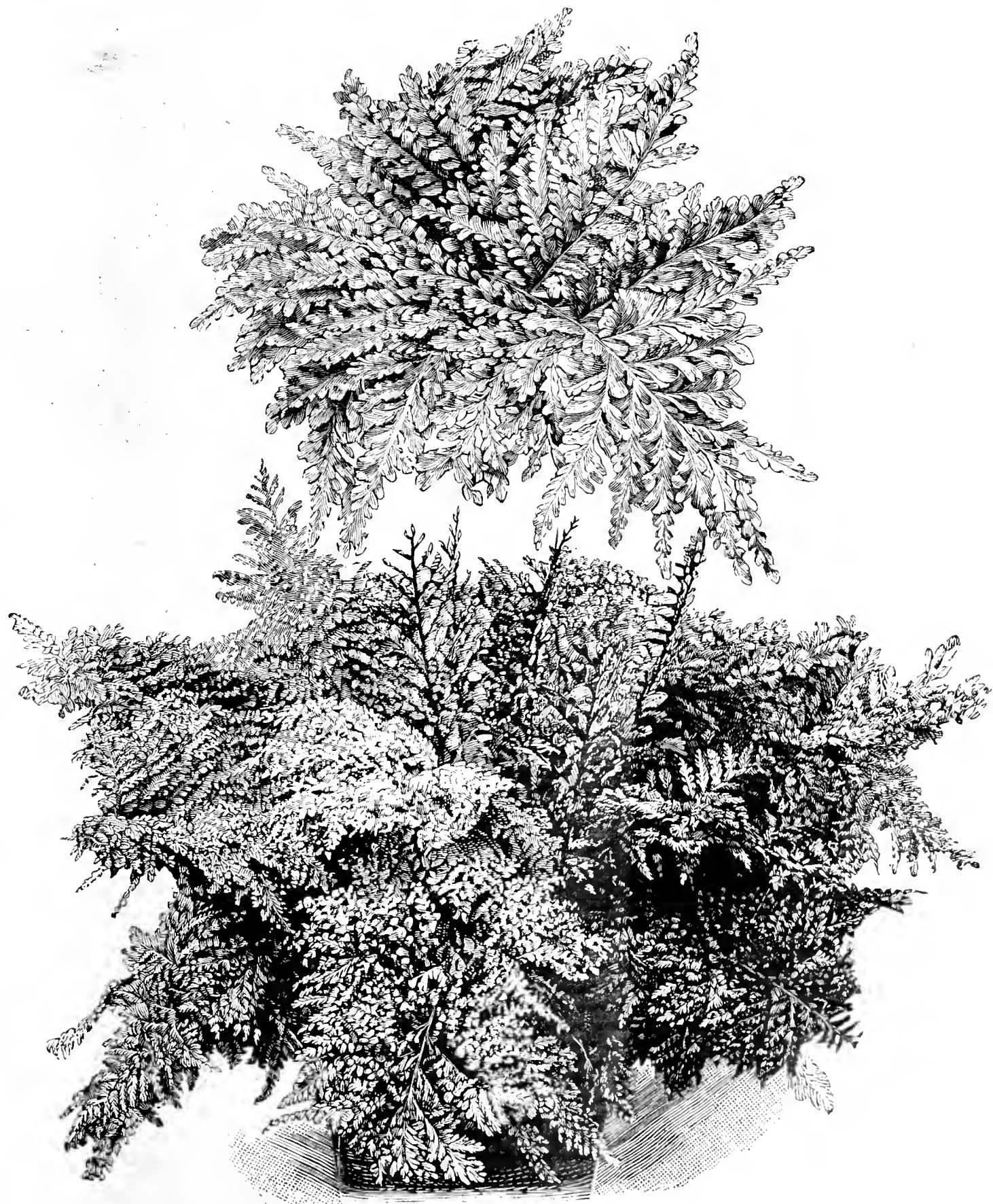
By noon of the 23rd, the scratch Coronation Eleven (N.C.S.) were in their element, "pinching" runs, "stopping" lateral "shoots," and "cutting" with wonderful skill. How else could they on such a day and occasion? They managed to obtain seventy runs against an eleven from Paddockhurst, and as Mr. W. J. Simpson, the captain, was well satisfied, his team is supposed to have been the same! The performance was creditable, and the local men were but fourteen runs ahead.

Lunch intervened during the play, and it was here that the loyal toasts were given and received, Mr. Thos. Bevan occupying the chair. The healths of Sir Wheetman and Lady Pearson were proposed, and sincere

thanks conveyed through Mr. Wadds, the head gardener, for the kind privileges they had allowed to members of the society on this occasion. Mr. Wadds returned acknowledgment, succeeding which Mr. Moorman proposed "The Visitors," and the response came from Mr. T. W. Sprunt, Mayor of West Ham. Recognitions to the chairman and the society's secretary, proposed by the genial Mr. Witty, terminated the luncheon programme.

The afternoon was now wearing on, and while the stalwarts at the wickets still continued their game, the majority of the visitors quietly visited the delightful gardens, and had the additional freedom of inspecting the magnificent home of Sir Wheetman and his lady. Nor could one tire when once within the walls of this noble residence, adorned as it is with statuary and mural dressing. The attached conservatory, with its lofty Tree Ferns, Palms, and Araucarias, is well equipped for indoor recreation, with tables for games of a quiet but amusing nature.

The views from the south windows are truly magnificent, for the eye can travel over miles of parks and densely wooded highlands, the expansive vista seeming to embrace a splendid valley, which closes in hills at the far horizon. The south front is supported by a tall balustrade terrace, over which one looks to the undulating grassy slopes, closely shorn of their verdure, and



A hybrid Fern, *Polypodium Schneideri*.



down to a coolsome waterpool with Lilies on its glassy surface, and here, too, the scene is capped by the intrusion of an arched stone bridge, the whole standing forward from a background-setting of matured trees and shrubs.

Upon the terrace itself Mr. Wadds has successfully arranged some pleasing colour contrasts in the scroll-beds laid out in gravel, and edged with Box. Through an opening in the dividing wall we ascend the flight of stairs and enter a garden of Roses with massive beds on either side, and marvellously prolific Crimson Ramblers smothering a lengthened series of arches. What a feature it is too! and one eminently worthy of being copied in a hundred other places. The glass ranges are just here stretching backward and variously disposed. In front of the vineries are the Chrysanthemums, all robust and clean. The Vines themselves are bearing well, particularly those in pots, on some of which were seven good bunches. The pots are fitted with zinc collars inside of which is the top-dressing.

Here there is also a fair-sized Banana house with plants in fruit, the glass side walls being screened with *Lygodium scandens* trained erectly on strings. *Acalypha musaica* and *Eulalia japonica variegata* occupy the stage, the red foliage of the former contrasting admirably with the graceful white grass of the other.

The ferny grotto, after the style of Pulham's creations, and possibly executed by them, was a great feature to all, and the more observant did not fail to notice and admire the huge hanging baskets of *Allamanda Williamsi* wreathed with dark green leaves and bright yellow flowers, in the stove. *Oxalis rosea* in baskets suspended from the roof of another house furnished an admirable summer substitute for *Begonia Gloire de Lorraine*, of which there is also a capital collection of young plants advancing. All sorts of decorative greenhouse and stove plants are cultivated with conspicuous success.

Lady Pearson also delights to have houses wholly devoted to one genus of plants, and here you will see *Fuchsias*, all bushy and flower-laden; another of coloured *Caladiums*, followed by *Codiaeums* (Crotons), *Calanthes*, *Cypripediums*, *Cattleyas*, and *Odontoglossums*. Seldom, or never, have I seen better *Calanthes* than those now showing their breaks, and the other Orchids and plants likewise are healthy and promising well. The orchard house trees are very creditable, even though the house is ill suited for the purpose.

Huge and beautifully finished Melons occupy two or three span-houses, and Cucumbers are not wanting. Near the houses, on a higher level, is the long double archway of *Pyrus* in variety seen at this season, when the long slender shoots are full grown, the effect is such that none can help admiring it, though it is not easy to describe the impression in print. The kitchen and fruit garden lie more to the west, and are divided from the ornamental grounds and glass ranges by high hedges. Fruit crops are fair, but the season has been unfavourable.

The home farmstead is built on the most up-to-date plans, and every feature is of the best. It would occupy too much space to detail its parts, however, though that too, might be interesting.

Tea came acceptably at about 5.30, and by seven the brakes were prepared for the home journey. A number of us must needs, however, climb to the summit of the square-built tower, but Providence alone knows how some of the ladies, "fair, fat, and forty" (decidedly adipose and quite forty!) reached the top to tell the tale. 'Twas enough for my attenuated frame to wriggle up that screw-like coil, but the effort was as amply repaid as in climbing the Matterhorn to witness a sunrise over the glaciers. By eight o'clock the little band of pilgrims, having dwelt together in amity for one whole day (!) were securely in the train, and contemplating the success of the outing. Those disposed to philosophise might well have asked whether any ungenerous feeling in reality exists among members or officials of the National Chrysanthemum Society, for truth to tell, the best spirit possible pervades the pic-nics—as it should do.—WANDERING WILLIE.

#### Clydesdale Strawberries.

Just now it might be said that the Clydesdale fruit-grower thinks "in Strawberries," for the season's harvest is at present at its height. While the crop gives evidence of being a fairly good one, it is questionable if such a peculiar season has been experienced since the year 1879. The fruit, so far, has never had that marketable appearance usually looked for in Clydesdale-grown Strawberries, as, owing to the wretched spring and the lack of genial sunshine, it caused the fruit to hang too long in the bud before coming to maturity. Indeed, so small has been the fruit on some orchards that growers have almost been compelled, owing to the low prices obtaining for same in the market, to send it to the preserve manufacturers. Should the later varieties not "swell out" better than the early ones, there must be a considerable shortage from last year of this delicious fruit.

## NOTES



#### Victoria Medal of Honour.

The President and Council of the Royal Horticultural Society have conferred the Victoria Medals of Honour in Horticulture, vacant by the deaths of Mr. G. F. Wilson, Mr. Wm. Bull, and Mr. E. G. Beale respectively, upon Mr. John T. Bennett Poë, Mr. George Massee, and Mr. Henry Cannell.—W. WILKS, Secretary.

#### The Royal Aquarium Sold.

This place of entertainment, in Westminster, has been sold, we believe, to the Wesleyan Methodist Union as a site for a large new church to be erected by them. The Royal Aquarium has been the exhibition place for the National Chrysanthemum Society's shows for many years, and for two years the National Sweet Pea Society had held an annual exhibition there, besides which there have been Dahlia shows and other horticultural meetings within its walls.

#### Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, August 5, in the Drill Hall, Buckingham Gate, Westminster, from 1-5 p.m. A Silver Flora Medal will be offered for the best collection of Cactaceous plants, open to amateurs. For other prizes, address Mr. Blogg, 65, Brighton Road, Croydon. A lecture on "Small Fruits from a Private Garden Point of View" will be given by Mr. J. Smith, V.M.H., at three o'clock. \* \* At a general meeting of the Royal Horticultural Society held on Tuesday, July 22, thirty-three new Fellows were elected, amongst them being the Countess of Kingston, Lady Mary Morrison, Lady Stradbroke, and the Right Hon. A. H. D. Acland, making a total of 859 elected since the beginning of the present year.

#### The Neill Prize in Horticulture.

Mr. David Murray of Culzean, who has just been awarded the Neill Prize by the Royal Caledonian Horticultural Society, is a well known and highly esteemed horticulturist, who began his gardening career at the age of fourteen, and served for a time in Abercainey Gardens, Crief. From there he entered on a three years' term of apprenticeship in Blair Drummond Gardens, and after serving for a time in other gardens he found his way into the gardens of the Duke of Buccleuch at Dalkeith, then in the height of their fame and under the charge of Mr. Wm. Thomson. Here he served through the various departments for six years. David Murray was one of five young men selected by Mr. Thomson to take charge of the Pine Apple department in the Clovenfords nurseries, then just started. After three years at Clovenfords, at the age of twenty-four, he was chosen by Mr. Thomson to fill the post of head gardener to the then Marquis of Ailsa, at Culzean Castle, a post he has held with much acceptance to his employers and credit and honour to himself for the last thirty years. For many years Culzean has been famed for high-class gardening in all departments. In vegetable growing and fruit culture, both inside and out, Mr. Murray is perhaps best known, and he is the raiser of the famous Ailsa Craig Onion. The famed Culzean Curled Kale is also a creation of his. In fruit culture Mr. C. Murray has been most successful. His renovation of old orchards and the lifting of large Apple and Pear trees has been a great success. With indoor fruit his success has been equally satisfactory, and though not now so frequent an exhibitor at the autumn shows, the Culzean fruit has on many occasions taken leading honours at most of the large international shows. No finer example of high-class Grape culture can be found in the country than that which is to be seen, any season, in going through the vineries at Culzean, no light cropping, but heavy, full crops of finely shaped and finished bunches. A hearty welcome awaits the horticulturist who makes pilgrimage to this beautiful place on the Ayrshire coast, for amongst the many qualities of this successful gardener, not the least are his warm heart, his frank and open manner, and kind hospitality. May he be long spared to wear his honours, is the wish of many friends besides an—OLD CULZEAN BOY.

**Snow in July.**

Heavy snow fell on the 23rd inst., on the hills in the north of Scotland. The thermometer was down to 39deg this morning (July 25).—D. T., Esbank.

**Large Rhubarb.**

There can be seen growing in the garden of David Pitt, at Eccles, Kelso, N.B., a stalk of Rhubarb measuring 2ft 6in long; girth at the base 8½in; girth at the top 8½in; length of leaf 4ft; breadth of the same 4ft 8in, and measuring round the edge 26ft 6in.—July, 1902.

**Strawberries at Aberdeen.**

The first of the local Strawberry crop appeared in the market about July 15, or a fortnight later than usual. The crop is a light one. The berries are of an unusually small size when contrasted with the big, juicy, finely-flavoured fruit of a favourable season. The retail prices on Saturday, July 19, ran about 10d. per lb., and wholesale about 8d.—or nearly double the price in ordinary seasons.

**Digitalis orientalis.**

*Digitalis orientalis* has long, slender, self-supporting stems, with very numerous, small, straw-coloured flowers. As in *D. sibirica*, the stems are branching, but it is much dwarfer in habit, elegant and graceful. The height is 2ft to 2½ft. Both are true perennials and perfectly hardy, like *D. ambigua*, not like the ordinary Foxgloves of gardens, which are biennials. For a number of years experiments have been made to hybridise the various biennials with the true perennials to obtain a greater variety of colour, but there is no report on the results, which, however, are, after a number of failures, promising at last.

**A Sweet Pea Outing at Kelvedon, Essex.**

On Thursday, the 24th inst., a party of some sixty persons, including the chairman and committee of the National Sweet Pea Society, and members of the leading metropolitan and provincial seed houses, by the kind invitation of Messrs. Hurst and Son, of Houndsditch, journeyed to Kelvedon to inspect the extensive trial of Sweet Peas being grown by this firm on their seed trial grounds. The party found nearly 1,500 samples of Sweet Peas—many of the varieties being repeated—the collection including all the forms of the Cupid type, and all being in full bloom, an excellent opportunity was afforded for comparing the older varieties of Sweet Peas with the latest novelties. The Cupid types were seen to be generally carrying good heads of bloom, and there did not appear among them that tendency to drop their blooms witnessed in previous years. The cooler and moister weather was probably helpful in this direction. Some of the company devoted themselves to inspecting a very extensive and representative trial of culinary Peas, including nearly a thousand samples, while Lettuces, Onions, Beets, Carrots, Beans, &c., had attractions for others. There were also many samples of flower seeds which well repaid inspection. A word of warm praise is due to Mr. T. A. Newby for the admirable manner in which the numerous samples are arranged and supervised, and the grounds kept. Mr. N. N. Sherwood is in much improved health.

**Cordon Pears Grown under Glass.**

In cold or unfavourable districts it is sometimes more profitable to cultivate part at least of the Pear crop under glass. Noxious vapours too, may have to be avoided, and indoor treatment is then much more satisfactory. The engraving shows a Pear house at Lambton Castle, 324ft long, lean-to and facing south-east. The house is wired 1ft from the glass, and the Pears are planted along the front. Strawberries are grown on shelves in the same house, and sufficient light is afforded for odd plant culture beneath, though this is better avoided where practicable. No fire heat has been found necessary, early closing on sunny afternoons being sufficient. The fruits come into use during August from the following varieties among others: Jargonelle, Beurré Gifford, Clapp's Favourite, and Beurré de l'Assomption. In September we have Williams' Bon Chrétien, Beurré d'Amanlis, Beurré Superfin, &c. October: Louise Bonne of Jersey and Beurré Hardy. November: Doyenné Boussoch, Marie Louise and Maréchal de la Cour; other late varieties will continue the supply till springtime. The present is a suitable period for the construction of such houses.

**June Weather at Temple House Gardens.**

In your report last week you omitted to give the rainfall for June, 1902, which was 3.42in, as against the 1.36 for June last year.—GEORGE GROVES.

**Appointment.**

Mr. C. F. G. Candler, for the last five years head gardener at Foxbury, Sevenoaks, Kent, as head gardener at The Kent County Asylum, Chartham, Canterbury. He entered upon his duties on July 7.

**Cyclopedia of American Agriculture.**

Professor L. H. Bailey, of Cornell University, has announced his intention of beginning work at once upon the "Cyclopedia of American Agriculture," supplementing the Cyclopedia of American Horticulture, but differing from it in that it will be a book of instruction rather than a reference work.

**Weather in South Perthshire.**

We still await the advent of summer. Occasionally a warm day has occurred, but generally the temperature has been unusually low, and there has been comparatively little sunshine. On Friday, the 25th, the northern hills were covered with snow, and frost has left its mark on Beech hedges and tender plants. Potatoes are in many places quite blackened. The hay crop is abundant; cereals are promising a good return, but are at least three weeks late.—B. D., S. Perthshire.

**Poppies and Sweet Peas.**

The Sweet Pea is capable of great improvement, and we hope to witness changes for the better in this beautiful and fragrant flower. And with Sweet Peas could not our National Society, which watches the interests of the flower, enlarge its field and include the Poppy genus as one eminently suited to accompany the Sweet Pea in its progress, and worthy also of the attention of trade and private cultivators? The genus *Papaver* yields considerable variety in species, and systematic hybridisation, crossing, and selecting amongst the species and varieties would surely be successful from many points of view, and seems well worthy of being undertaken.

**Carpenteria californica.**

An uncommon shrub, but one that is gradually becoming better known, and more fully grown. In sheltered gardens even in Scotland it succeeds. We have seen healthy specimens at Tynninghame, and at Edinburgh. Yet it is usually regarded as being very tender. On the right hand central page we figure a flowering branchlet, this being the period of its blooming, or in more favourable years, June month. The white flowers are 2in to 3in across, like the white Japanese Anemone, and are borne in racemose cymes. The golden anthers of the stamens too, render the flowers additionally attractive. It loves a light, warm soil, and furnishes a capital pot shrub for a greenhouse. Increased from seeds, layers, cuttings, or suckers, it soon forms a bushy plant, and requires very light pruning or thinning. (See page 107.)

**South African Irrigation.**

The full text is now published of the report on the possibilities of irrigation in South Africa by Mr. W. Willcocks, managing director of the Daira Sania Company, Egypt. It is, he says, fortunate that nearly everywhere in the Transvaal, in the greater part of the Orange River Colony, and over wide areas of the Cape Colony, the rainfall is sufficient in quantity in even the very worst years to allow of the storage of water on a very large scale. On a rough calculation he states that, with the aid of its rainfall and the Orange River, the Cape Colony should be able to ensure the perennial irrigation of 1,000,000 acres, the Orange River Colony of 750,000 acres, and the Transvaal of 500,000 acres in the high-lying regions where Europeans can live and work, and 1,000,000 acres in the low tracts, which should, he thinks, be thrown open to our fellow British-Indian subjects. Mr. Willcocks concludes his report to Lord Milner as follows:—"South Africa, with an additional 3,000,000 acres of perennially irrigated land gained at an expenditure of £30,000,000, and valued at £100,000,000, and also with 10,000,000 acres of land under crops depending on rainfall, which might be valued at another £100,000,000, would be a very different country from that which it is to-day. An addition of £200,000,000 to the permanent wealth of South Africa would enable the country to contemplate with serenity the dark days of its gold and diamond industries."





### Dishes and Baskets for Staging.

I want to make some changes in the way of setting up fruit and vegetables at our show. Could you, or any of the readers of the Journal, give me an idea which are the best sorts of dishes or baskets to use for setting up, say, six Potatoes or six Apples, and where they are to be had? An answer through the Journal would greatly oblige.—J. M. W.

### The Crimson Rambler Rose.

I sometimes hear criticisms passed on this much-grown climber to the effect that the panicles of flowers are small, and that it is often not very showy. When such is the case it is invariably caused by unsuitable treatment. Plants grow so rapidly that they quickly cover their allotted space, and form a dense mass of shoots—if these are not kept regularly thinned. The result is that the panicles of flowers are very much smaller than they should be. To grow Crimson Rambler to perfection it requires good soil and an open situation. The shoots produced are then very strong. These should be thinned to 1ft or 9in apart. Under such treatment panicles of flowers from 9in to 12in are produced of a vivid crimson colour, and one such panicle is far more showy than a dozen small ones, and at flowering time no Rose grown produces a more showy effect. Those who have trees which have become a thicket of growth should thin the shoots severely at once, cutting away the older wood, and leaving the strongest young shoots. Then with plenty of feeding splendid results may be looked for next season.—H. D.

### Gardeners' Bothies.

It is comforting to all ye inmates of, and aspirants to, the chequered life incidental to the bothy, to know that yet another fairly comfortable domicile for young men stands somewhere in the precincts of the celebrated gardens of Nostell Priory. So far as I can infer from the photo, the whole outward features are in the highest degree poetic and provocative of no small amount of sentiment, and that is as it ought to be. But why accuse some, Mr. Easter, for being a trifle sentimental on a question that really never contained but scant measure of that necessary attribute in its composition? I am digressing; let us to the bothy. It looks suspiciously like the conventional back-of-the-wall lean-to-something so often initiating the long line of necessary offices attaching the ordinary garden. It may not be so, but it is sometimes difficult to overcome a first impression, and I do not admire those dreadful prison-like spear pointed railings which circumvallate the bothy and make it dangerous, indeed impossible for the innocents to break in or out, if circumstances should so ordain matters. Then there seems not place sufficiently spacious between the Ivy clad walls and the ponderous ferric palisades, whereon the young men can play a cast at pitch and toss, nor posit a chair to scan the evening news, and fill his lungs of the needful commodity—oxygen—after his ten hours' contact with the depressing influence of carbon dioxide. It also appears to open into the street. This is highly objectionable, if it is so. On the whole it certainly is a passable bothy, if all the up-to-date sanitary arrangements are adequately represented within. The Ivy ought to be cleared, however, from the windows to admit as much air as possible, as I fancy there is not all through circulation of air, if the vallum hortensis forms the opposite wall of the building. As to this indispensability of the bothy attaching to pretentious gardens, I think, the case of Edinburgh Botanical Gardens is sufficient to show that the contrary is equally satisfactory. Here some years ago the bothy system was dethroned, and as far as I am aware, the result was most desirable.—C.H.S.

[We can assure our correspondent from personal experience of Nostell Priory bothy, that it is exemplary both in outside appearance and internally in its arrangements. It is situated on the east side overlooking the fine garden, the fruit and plant ranges being within a very few yards of it. One side is covered with Ivy, the other side with fruit trees. There is no "street" near it, but there is a handsome and typical English park almost adjoining, in which "pitch and toss" could be indulged in; even if not, the slightly superior game of cricket can be enjoyed almost any evening on a beautiful pitch in the neighbouring village of Wragby. The bothy is a good one in every respect.—Ed.]

### Asparagus Beds and Produce.

I must thank you for your most valuable and kindly help when making my Asparagus beds from old Mushroom beds. The produce is quite splendid this season, but being first season for cutting I have taken your advice and cut very sparingly, possibly too much so. I stripped off all the berries last year, but this year it seems to be too thick and heavy to get about. Is it necessary to do this every year? [Certainly best.] My Asparagus realised as much as 4s. 6d. per 120 shoots, and never less than 2s. 6d., in Manchester, which pleased me. I am hoping to put down another acre this year.—CAMBRIDGE.

### Decayed Melons.

I have a large greenhouse full of Melons in full bearing. A number of the plants have borne really very fine fruits, and quite a number have swelled to about 2lb weight. These are partly netted, but have turned yellow and have rotted at the bottom and top of the fruit, and others have a small, hard, green spot, which forms when the Melon "nets," and when the fruit ripens it rots in these spots; otherwise the Melons are perfect, both in netting, colour, &c. Could you or your readers kindly tell me, through the Journal, what is the cause of these defects; and is there any cure for them? I might add that I bought the plants.—"RASPAIL." [See answers to correspondents.—Ed.]

### Sweet Pea, Dorothy Eckford.

At a meeting of the committee of the National Sweet Pea Society held on July 15, no less than five pure white Sweet Peas were shown. These were named White Queen, White Wings, Lily, Purity, and Dorothy Eckford, and all were identical. Each had come with Miss Willmott, and some discussion took place as to which name should be recognised. It was eventually decided that if Mr. Eckford could prove to the satisfaction of the committee that the seeds of the white variety were accidentally mixed with those of Miss Willmott, the Certificate of Merit should go to him as raiser. This Mr. Eckford has done, and the accepted name is Dorothy Eckford. The exhibitors—Messrs. Dobbie and Co., Hobbies (Ltd.), I. House and Son, and Jones and Sons—will, it is hoped, recognise this name, so as to prevent needless multiplication of names.—H. J. WRIGHT, Hon. Sec.

### Gardeners' Education.

The discussion on the gardener's education seems to have lulled a little lately, and I am rather surprised that no champion of learning has attempted to refute the arguments put forward in the interesting letter from the pen of "Domestic Working Gardener," on May 22. I read it over several times, and could come to no other conclusion but true! alas too true! "Domestic Working Gardener" admits that he is not educated. Perhaps not, but he possesses the capacity of being able to state plain facts in plain words. I was also struck with the sensible remarks in the contribution from a "Northern Gardener" on June 5, and agree with him that the pictures of a gardener's life are frequently too much overdrawn. To encourage young gardeners to improve themselves educationally is very commendable, but let them understand the true facts of the case. Place before them the uncertainties and drawbacks of a private gardener's career, as well as the possibilities. I agree with "Domestic Working Gardener" that it is wrong to buoy up the youth of gardening that if they dabble in half a dozen sciences they are ensuring for themselves a good position. Let them learn the sciences by all means, but be honest about the chances a gardener's career holds out.

I daresay other readers of the Journal besides myself ruminate sometimes on the way gardeners are made in these days. In many cases it is merely a process of drift. Few people of even the lower middle class, who are not engaged in horticulture, bring up their sons as gardeners; the chances are not good enough. From what ranks, then, are gardeners drawn? It often happens in this way. A gardener in an establishment in the country is limited with respect to means and facilities; and he has little choice in the way of occupation for his sons. The garden provides a ready, and sometimes the only opening; and so they get started on their way to take their chances with the hundreds who are clamouring for the few plums of the calling. Others have no direct intention of being gardeners at all. When old enough to work they obtain employment in a private garden, just as they might in a factory or elsewhere, and then drift along. There comes the vacancy in the bothy first, then two or three moves to gain experience, and after that a foremanship. It is when the young man reaches the latter status that he realises the uncertainty of his prospects. He may be capable, hard-working, and educated. These qualities will help him, and so also will influence if he is fortunate enough to command it.—G. ASH.



**Carpenteria Californica.** (See page 105.)



## On Fruit: Its Shrinkage.

(Continued from page 511.)

This subject has not received the attention that it demands. It is important to modify the damaging and unsightly effects of shrinkage of fruit if it be practicable. Some of the causes of it, such as early frosts, will probably never be within the fruit-grower's control: too much shade may of itself lead to some degree of shrinkage, but this must be slight, except when the heads of the trees are so thick with branches and leaves as to hinder a free and full circulation of air. Such shade hinders the circulation of juices in the growing fruit, which has much influence on its future perfection. Heavy fruit trees should be trained in forms sufficiently open to admit constantly a full circulation of fresh air, especially when growth is most rapid. Sunlight, by its action upon the foliage, furnishes largely the power that runs the machinery of the fruit tree. The amount of this power that a tree can use in a measure determines how much fruit the tree can bear and bring to perfection. The main cause of shrinkage of fruit is the arrest of growth, the result of insufficient nutrition, and lack of moisture.

### Fruit Trees Need Water.

If the supply of water in the soil in an orchard is deficient when the fruit is maturing, as it sometimes is, even in England, the trees cannot produce a full crop of fruit, nor will the fruit (especially Apples) be properly coloured, however well they may have been fed and otherwise cared for. The lack of a sufficient amount of water in the soil in orchards is often the cause of Apples dropping prematurely, and the proper ripening of late fruits in the autumn. While it may be impracticable to attempt to supply water artificially in most cases, yet much can be done by good management to prevent the needless escape of the natural supply, and in this way large quantities of water may be retained in the soil for the use of the trees when it is needed by them. A mulch of grass, lawn mowings, leaves or other organic matter is useful for this purpose, and the ground in some cases may be cultivated in the open spaces to good advantage. In this connection a protest may be entered against the practice of trimming off the lower limbs of Apple trees. This allows the wind to sweep through beneath them, and the sun to shine in and dry up the soil over their roots.

### Sunlight and Fruit Buds.

Limbs of Apple and Pear trees that are exposed to strong light produce more fruit buds than those which are in partial shade. Florists find that sunlight will bring out the blossom buds for them if their plants are otherwise well cared for, and it appears that it will do the same thing for those who have fruit trees when it is given a chance.

### Orchards Need Manuring.

It is sometimes argued that fruit trees do not need to be manured, and because Apple trees will exist and occasionally bear a partial crop of fruit if they are utterly neglected, it is too often assumed that they require no care after they are planted; but poorly-fed fruit trees can only be regarded from the fruit-grower's standpoint as unprofitable possessions. We have the strongest evidence of the necessity of a high state of fertility for Apples as well as for other crops, and also that the general principles of manuring which apply in the case of vegetable crops, apply to fruits, that is, the essential constituents must be the same. The necessity for their application is found largely in the fact that although an Apple, Plum or Pear crop, &c., is not a very exhaustive one, fruit-growing is really a continuous cropping of the same kind. There is an annual demand for the same kinds and proportions of soil constituents, hence the tendency to soil exhaustion is proportionately greater than where a frequent change of crops is practicable, differing in their requirements, both in respect to the amount and proportion of the essential constituents.

### Kind of Manure to be Used.

A very wide difference of opinion exists as to the kind of manure to use in fruit growing, though stable and farmyard manure is the kind more generally applied than any other form. Apples and Pears are slow-growing trees, and on soils of fair fertility will make a good growth of wood for a number of years, because of their wide root system, and their relatively small annual requirements enable them to gather their food from larger areas and from relatively insoluble sources. Their continuous growth, too, teaches that, under average conditions, the cheaper fertilizing materials that give up their food slowly are, on the whole, more useful than the active and expensive nitrogenous manures; besides, the increased growth resulting from the use of such materials as ground bones, basic slag, superphosphate, kainit, and other potash salts, is more likely to mature well than that from quick-acting nitrate of soda, sulphate ammonia, or guano, which often cause a too rapid growth,

which fails to ripen. Of the essential fertilizing constituents, phosphoric acid and potash should be applied in greater relative abundance than nitrogen. For stone fruits, lime is an essential ingredient. French chemists consider a lime content of one-half of one per cent., an ample supply in light soils, while heavy soils may need 2 per cent. or more. It may be in order to state that the good effects resulting from the addition of lime to such soils do not come only from the addition of an ingredient essential to plant growth, but the mechanical condition of the soil, its texture, water and heat-retaining capacity, &c., are improved, that is, the improvement of the soil is both in a chemical and a physical direction, and one is as important as the other. This same is true in perhaps all cases where fertilizers are applied to soils, a fact which has been generally overlooked until very late, when the study of the physical properties of the soil has received more attention.—J. J. WILLIS, Harpenden.

(To be continued.)

## Scottish Notes.

That our two Edinburgh horticultural associations took a step in the right direction by holding a joint summer show, Wednesday's exhibition in the Music Hall, George Street, afforded abundant proof, and it is to be hoped that as a result fresh impetus will thereby be given towards the making of this midsummer show an annual instead of an experimental institution. It is obvious, however, that in order to make the venture a financial success, fresh measures must be introduced, so as to attract a larger attendance of the general public.

That an extended programme would be a monetary success is of course problematical, but if we are able to secure large drawings at the gates of our football fields on match days, why not be able to take correspondingly large returns from a two-days floral gala? Let this be held in one of our central public parks, such as the meadows, about the middle of the present month, the exhibits to be arranged in marquees. Let a first-class band be in attendance, a large marquee be provided for dancing, and similar provision made for the amusement of young and old. Let the project be liberally advertised, and a request sent to growers explaining the circumstances, and soliciting an exhibit, and there is no mistaking the fact that a successful result could be arrived at, both financially and otherwise.

Considering the unpropitious nature of the weather, the number and quality of the exhibits staged in the Music Hall was highly gratifying. Both trade and gardeners' exhibits of Sweet Peas, Malmaison Carnations, Pæonies, and other hardy border flowers were well staged, and presented a very pretty effect. Roses were not numerous, with the exception of two fine lots from the well-known growers, Messrs. Croll, Dundee, and Dickson, Belfast. Those from the latter place were superb, and for freshness and quality excelled anything I have seen staged in the Waverley Market. Among them were some new seedlings, of which Dorothy and Hugh Dickson were much admired. The Dundee Roses were also good, but showed the effect of having been reared in a colder climate.

Messrs. Cunningham, Fraser and Co.'s exhibit of hardy flowers was a gorgeous display of colour, and included fine seedlings and named Pæonies and Delphiniums, also Inulas, Iris, Erigerons, Scabious, Dictamnus, &c. Carnations were represented in great variety by both Messrs. Laing and Mather, Kelso, and M. Campbell, High Blantyre. Besides Malmaisons, good blooms of varieties such as the following were noted: Goldilocks, Mrs. McNish, junr., Highgate, Voltaire, &c.

Perhaps the most interesting table in the show was one containing Nymphaeas and Nelumbiums; the flowers and foliage were shown in basins of water, and received a considerable share of attention. A glass case containing living insects was also probably worth while examining, but during the few minutes I beheld it, few were to be seen. Mr. McMillan, gardener to Mrs. Currie, Trinity Grove, had an exceptionally fine lot of Pæonies in a wide range of colour.

Mr. George Wood, Oswald Road, was forward with a table of choice foliage and flowering plants, including Clerodendron fallax, Dendrobium suavisimum, Epidendrum vitellinum majus, &c. He had also a branch of Gooseberry Preston Seedling suspended from one of the pillars, and it was truly loaded with large berries. In conversation with Mr. Wood, I learned the origin of this splendid berry, it having been found by a workman in an old quarry about twelve years ago, by whom it was given to Mr. Walker, market gardener, Prestonpans.

A specimen Hydrangea of a blue tinge, carrying over twenty-five blooms, was shown by Mr. John Dewar, gardener to Wm. Currie, Esq., Millbank, Grange Loan. Those enumerated were but a few of the numerous exhibits which filled the hall.

## Societies.

### Royal Horticultural, July 29th.

The following awards were made on the above date:—

*Maranta insignis* (Wm. Bull and Sons).—Leaves about 15in long, 2in wide in the centre, with wavy edges. They are bright green, with olive-green markings. (Award of Merit.)

*Rose Field Marshal* (Wm. Paul and Son).—A splendid new climbing Monthly Rose, rich bright crimson, which we hope soon to figure, and will have more to say about it then. (Award of Merit.)

*Rose Ben Cant* (B. R. Cant and Sons).—An H.P. Rose now well known, and of good general merit. It is of a vivid crimson, with smooth petals of much substance. (Award of Merit.)

*Strawberry The Khedive* (J. Veitch and Sons, Ltd.).—Rather small fruits of excellent flavour and firm flesh. It is rather long and deep-coloured. Parents: Lord Suffield and British Queen. (Award of Merit.)

(See also *Cattleya Waviana* under "Orchids," and *Strawberry Givon's Late Prolific*.)

### Nottingham Horticultural, July 16th and 17th.

The Notts Horticultural and Botanical Society's annual show was held in the grounds of the Nottingham Arboretum on Wednesday and Thursday, July 16 and 17. The opening was under more favourable conditions than the previous year, when it rained heavily on both days, resulting in a great financial loss. The attendance at this year's show has been a record one, and will greatly help the society's exchequer. Owing to the lateness of the season, the entries for outdoor fruits and vegetables were much under the average, but, on the other hand, Roses were at their best, and were shown in great abundance and of exceptional quality. A leading feature was the tables of Roses (6ft by 4ft) arranged for artistic effect, the result being very pleasing, breaking the monotony of the almost endless display of Roses on stands.

A rather novel feature was the fireplace decorations, real fireplaces and overmantels being used. The competition was strong. Most of the decorations were rather overdone, and heavy in effect in consequence. The large groups of stove and greenhouse plants were well represented. Mr. G. H. Turner, of Littleover House, Derby (gardener, Mr. Thompson), secured first prize, together with a Silver Cup offered by Lord Henry Bentinck, M.P. He had a well balanced and artistically arranged group, in which highly coloured, single stemmed Crotons were the leading feature. The second award was secured by Mr. W. Vause, Leamington; and the third, by Mr. W. Artindale, of Sheffield. In the smaller groups we found the class arranged by the committee for the benefit of single-handed gardeners not quite so well supported. The first prize, together with a Silver Cup offered by the Mayor, was awarded to Mr. R. Halford, J.P., Nottingham (gardener, Mr. John Taylor), the arrangement and general effect being light and graceful.

In the class for a collection of indoor fruits there was very limited entry; first, however, was secured by the Earl of Harrington (gardener, Mr. J. H. Goodacre), with a well finished collection of fruit, including Peaches, two varieties; Nectarines, two varieties; Apples, two varieties; Grapes, two varieties; Pine-apple, Figs, and Melon, the collection being backed up with trees in pots loaded with their respective fruits. The second prize was secured by the Earl of Carnarvon, Bretby Park (gardener, Mr. J. Reed).

The following trade exhibits received the society's Gold Medal for excellence:—Mr. H. Deverill, Banbury, for a collection of herbaceous flowers; Messrs. Dicksons, Limited, Chester, for ditto; Mr. J. H. White, Worcester, for ditto; Mr. W. L. Pattison, Shrewsbury, for Violas. A Silver-gilt Medal was awarded to Mr. C. Holden, Hinckley, for a collection of Sweet Peas.

### Wallasey (Cheshire), July 23rd.

Owing to the enthusiasm and generosity of the inhabitants of this delightful Cheshire suburb, the committee, in addition to a Chrysanthemum show, have, for the first time, been able to present their subscribers with a summer show also. The Central Park, where the display was held, was at one time the famed private residence of the district, and although much opposition was raised at the time, no one surely can regret that the District Council purchased so valuable a site for a public park. The exhibits were staged in a very large marquee, and were of uniform quality throughout, the great centre of attraction being the superb boxes of Roses sent by Messrs. Alex. Dickson and Sons, Newtownards.

Mr. H. Middlehurst's Sweet Peas were much admired, as was the group of Carnations in pots from Mr. T. Raffles Bulley, of Higher Bebington, all of which received certificates. There were four groups of plants arranged for effect, the winner being Mr.

Grindley, gardener to Mrs. D'Arcy Blackburn, Poulton. Mr. H. Ogden, West Derby, was second; and Messrs. Fullerton third. Throughout the stove and greenhouse classes Mr. Grindley was well forward.

In cut Roses and herbaceous plants Dr. Bell, St. George's Mt., New Brighton, and Mr. Raffles Bulley contributed in brilliant style. Mr. Gregory had the best four dishes of fruit, also Black Hamburgh and Muscat of Alexandria Grapes.

Dr. Aldershaw opened the show, which was well attended during the day. Bands of music, Pierrots, and other attractions made merry the scene, and reflected much credit on Messrs. Auchterlonie (chairman), Rooking (vice-chairman), Dale (treasurer), the persevering secretary, Mr. J. Finnigan, and the committee.—R. P. R.

### Cardiff, July 23rd and 24th.

The fourteenth annual flower show of the Cardiff and District Horticultural Society was held on the above dates in the Sophia Gardens, in beautiful weather. The show was formally opened by the Mayor, Mr. F. J. Bevan, supported by a distinguished company. The show itself excelled all previous local exhibitions in all-round merit. The local entries also increase as years go on, and there are more this time than ever before. Notwithstanding the difficulties growers have had to contend with through the lateness of the season, many of the exhibits were of superb quality, which made the competition very keen. How much this continued prosperity is due to the unflagging exertions of Mr. H. Gillett, the genial secretary, and a sound hard-working committee, only those acquainted with the inner working of the society can fully appreciate.

Among so much of interest it was difficult to pick out any for special mention, but the two beautiful groups of flowering plants and foliage plants which formed the central feature of the principal marquee were marvels of beauty. Mr. J. Cypher, Cheltenham, was again the successful winner for the principal prize (group 150ft). The table decorations were of high merit, and tastefully arranged. Roses were in abundance, and some excellent blooms were staged, while Sweet Peas were much in evidence. Vegetables were up to a very high standard, and competition was very keen all through, Mr. H. T. Bastin being the most successful competitor in these classes. Fruit was poor in some classes, and on the whole, not up to the usual standard of previous years.

A centre of attraction was a collection of Japanese Dwarf Trees shown by Mr. Eida, of London, which was one of the chief novelties of the show. Another feature of the show was the competition among affiliated societies, for which Messrs. David Duncan and Sons, proprietors of the "South Wales Daily News," gave special prizes, including a Challenge Trophy and silver bowl, value twenty-five guineas, for the best collection of cut flowers grown in the open air, occupying 12ft by 3ft; and for the best collection of vegetables, 6ft by 3ft. Margam and District Horticultural Society were the successful competitors; St. Hagan's and District, second; Peterstone and Ely District, third.

Awards.—Plants, class 1, open: For four stove or greenhouse plants in bloom, distinct, Mr. James Cypher was a good first. Mr. John Lockyer, gardener to I. C. Hanbury, Esq., Pontypool, second. Mr. B. Carpenter, gardener to W. J. Buckley, Esq., Llanelli, third. For four foliaged or variegated plants, or Ficus, distinct, Mr. James Cypher was again first, closely followed by Mr. W. Carpenter. For a group for effect (150 sq. ft) Mr. J. Cypher led with a magnificent group, beautifully arranged, Mr. W. Carpenter running a close second. In the classes for twelve and six table plants, Mr. H. L. Bastin, gardener to Sir A. Henderson, Bart., Farringdon, Berks, was first in both classes; and Mr. Geo. Wall, Llandaff, second. Roses were all splendid. For twelve distinct, in trebles, Mr. R. Crossling, Penarth, was first; The King's Acre Nurseries, Hereford, running a very close second. In the other six classes for Roses the principal prizewinners were Mr. Stephen Treseder, Cardiff; J. Townsend and Son, Worcester; King's Acre Nurseries, Hereford; Mr. R. Crossling, Penarth. For six Carnations and six Picotees, distinct varieties, Messrs. Blackmore and Langdon, Bath, came first; and Mr. A. W. Pike, Cardiff, second. W. Tuplin and Sons, Newton Abbott, Devon, were first for a collection of Carnations and Picotees shown with their own foliage; Mr. R. Crossling, second.

For a collection of hardy flowers, in varieties, W. Treseder, of Cardiff, was first, and W. J. Stokes, Trowbridge, second. In the class for eighteen vases of distinct Sweet Peas, there were six entries, Messrs. I. House and Son making a good first, and were closely followed by Mr. H. Harris, gardener to Mrs. Jenner, Wenvoe Castle; Hy. Byass, Esq., Bridgend, third.

In Division B, for amateurs and gentlemen's gardeners only, for a plant group Mr. G. Wall was placed first, and Mr. W. Carpenter second. Mr. H. Rex, gardener to C. Waldron, Esq., took the lead for a lesser group. Three stove and greenhouse Ferns, Mr. W. Carpenter, first; Mr. W. N. Lawes, second. Some excellent groups of Begonias were staged, and



Mr. W. Metford, of Cardiff, with G. Wall and E. A. Parsons did well. Gloxinias were rather poor, Mr. R. Mathews, of Cardiff, having the best. In the Rose classes, Messrs. M. Febry, A. Townsend, and A. W. Morris were the principal prizewinners. Sweet Peas were shown in great variety, Mr. H. Harris being the most successful competitor, having firsts in each of the four classes. The floral decorations naturally constituted one of the most interesting features, and we found Mr. W. Treseder well in advance in many classes. Miss Jenkins and Mrs. Waldron, amongst others, were deservedly awarded leading prizes.

In the open classes for fruit, the competition was not so keen as in former years. Mr. O. H. Cox, St. Hilary; Mr. C. Curtis, Fairwater; and Mr. H. Gilman, Cardiff, were the most successful competitors with Grapes. For a white flesh Melon, G. Muscott, of Mountain Ash, was first; for a green flesh one, Jos. Greening, of Usk, took first place; and scarlet flesh, W. L. Bastin. In the collection of dessert fruit, six distinct dishes, first W. L. Bastin; second, Mr. C. Curtis. Mr. W. Carpenter was the only competitor for Pine-apples, showing the beautiful Ripley Queen. Apples were well represented, but small, while Peaches, Nectarines, Cherries, Apricots, Strawberries, and Raspberries were also well shown.

Seldom have vegetables of such a high standard ever been exhibited at Cardiff before. For nine kinds, W. L. Bastin was a good first, and was awarded the Royal Horticultural Society's Bronze Medal. Mr. Geo. Shewring was second and Mr. G. Wilkins third. Special prizes were offered by Messrs. Sutton and Sons, Reading; Messrs. Webb and Sons, Wordsley; Messrs. J. C. Wheeler and Son, Gloucester; Messrs. James Garaway and Co., Bristol; and Messrs. Ward and Co.

In the non-competitive section, A. E. Price, of Cardiff, contributed Sweet Peas in vases; while Gold Medals were awarded to Mr. J. Russell, Richmond, Surrey; and Mrs. S. Eida, Conduit Street, London. Silver Medal awards went to Blackmore and Langdon, Bath; R. Wallace and Co., Colchester; Henry Eckford, of Wem, for a good collection of Sweet Peas; Dicksons and Co., Chester, for a collection of hardy cut flowers; and to The King's Acre Nurseries. Messrs. Garaway and Co., Bristol, staged stove and greenhouse plants; and Jarman and Co., Chard, herbaceous cut flowers and Roses.

### Leamington Spa (Warwick), July 23rd and 24th.

This show, which is due to the initiative of Mr. C. S. Birch, was held in the well-known Jephson Gardens, on the above dates. In marked contrast to last year the weather was fortunately fine, and the attendance good on each day. Mr. Birch is to be congratulated on his pluck in continuing the exhibition after the disastrous start (owing to the weather) made last year, and it is to be hoped that a summer show will now be held in Leamington each year. If more liberal prizes were offered for collections of fruits and vegetables, the number of exhibits in those classes would undoubtedly be materially increased. Mr. A. J. Nichols, as usual, proved a courteous and energetic secretary, and he carried out the duties in an admirable manner. The gardens, under the management of Mr. Dell, were in excellent condition, and when illuminated in the evening presented a fairy scene.

**PLANTS.**—Prizes of £10, £5, £3, and £2 were offered for groups of plants arranged in a space not to exceed 150 sq. ft. Three fine exhibitions were staged, and the contest for the premier award was a remarkably keen one. Eventually the judges decided in favour of Mr. Finch, Coventry, the Leamington Nursery Company being placed second. The contest was so close, that it was one of those cases in which the order of merit might have been reversed, and yet have met with general acceptance among those qualified to judge. Personal taste or fancy, however, must generally decide the point at such times. In Mr. Finch's group a rather tall arch formed the centre. This was surmounted by a fine plant of *Phoenix rupicola* as a central object, the arch being draped with light materials, with a few telling plants rising above them. The corners of the group were light and graceful, and from the groundwork elevated plants were raised here and there. Beneath the arch a good plant of *Croton Reidi* showed up to advantage, and a graceful Sugar Cane rose prominently from the groundwork, near which a few Orchids, such as *Oncidium flexuosum* and *Cattleyas* were placed. The whole produced a light and pleasing appearance, but when closely examined the foreground and groundwork were scarcely so well finished as in the second prize group. This exhibit had also for the central object a well formed arch, topped by a beautiful *Cocos Weddelliana*, the whole of the materials being beautifully fresh and well grown. The corners were light and well finished, and yet at no point were they too scanty. A few Orchids and other telling plants rose from the groundwork, and *Liliums*, *Tuberose*s, &c., were also effectively displayed. Beneath the centre of the arch a grand plant of *Dracena Victorice* was arranged, and no doubt if the arch had been slightly taller the effect of the group would have been improved. Through-

out it was noted for thorough finish of workmanship and high quality of materials. Mr. Vause, Leamington, was third with a good, though somewhat heavy display.

For six stove and greenhouse plants, Mr. Blakeway, gardener to Sir A. Muntz, Bart., Rugby, was first with plants in fine condition; Mr. Finch was second; and Mr. Vause third. The last-named exhibitor was placed first for the best specimen in bloom, showing *Statice Butcheri*. He also won for the best specimen foliage plant, showing a good example of *Croton angustifolius*.

**CUT FLOWERS.**—£4 was offered as the first prize for a decorated dinner table. This was easily won by the Leamington Nursery Company with a light and beautiful arrangement consisting of *Cattleyas*, *Odontoglossums*, *Epidendrums*, and that old yet most suitable *Oncidium* for such purposes *flexuosum*. The table also contained some bunches of Grapes. Mr. Vause was second, the third prize going to Mr. R. Greenfield. Messrs. Perkins, Coventry, were first for the best hand bouquet, being closely followed by the Leamington Nursery Company. These two exhibitors occupied a similar position for the best arranged basket of flowers. Messrs. Perkins also won for twelve Tea Roses, and for a like number of H.P.'s; the Leamington Nursery Company being second in each case. Only one exhibit was staged in the class for the best arrangement of Sweet Peas, and the first prize was awarded to Mr. R. Greenfield.

**FRUIT AND VEGETABLES.**—Mr. E. Crump, Leamington, won well for six dishes of fruit (*Pines* excluded), staging grand *Alicante* Grapes, also Strawberries, Peaches, Apricots, Currants, and Nectarines. Mr. W. Draper, gardener to R. O. Milner, Esq., was second. For two bunches of black Grapes, Mr. T. Lloyd, gardener to Lord Willoughby de Broke, Compton Verney, was awarded the second prize; Mr. Draper being first for two bunches of white. Mr. Wright, gardener to M. P. Lucas, Esq., won for a Melon. Mr. Crump was first for a single dish of Peaches, and Mr. Barratt for Nectarines. Mr. Crump also won in the classes for eighteen Tomatoes, and for six, with even, brightly coloured samples. Mr. Lloyd had the best collection of twelve varieties of vegetables, and was also first for six. Although not large they were clean and well staged. Mr. Finch was placed first for a brace of Cucumbers, showing Telegraph.

**NON-COMPETITIVE EXHIBITS.**—Mr. H. Martin, gardener to the Right Hon. Lord Leigh, Stoneleigh Abbey, Kenilworth, exhibited fine collections of both fruits and vegetables, and in each case they were smartly staged. Some of the best dishes among the fruit were fine Muscat and Hamburgh Grapes, Bellegarde Peaches, and Humboldt Nectarines; and among the vegetables, Tender and True Cucumber, Edwin Beckett Pea (grand), Onions and Cauliflowers.

Several well-known trade firms made a conspicuous display, and added materially to the attractiveness of the show. Hinton Bros., of Warwick, staged in excellent style a fine collection of Sweet Peas; Messrs. Harrison and Sons, Leicester, staged a strong collection of Sweet Peas and herbaceous plants. Mr. J. H. White, of Worcester, also made a fine display of herbaceous plants, and a bowl of choice Water Lilies. Another collection of cut flowers was staged by the Leamington Nursery Company; while Mr. Crump staged in good style a large and showy collection of fruit. Each of the above collections were awarded Certificates of Merit. Mr. Greenfield added another first-class certificate to those already gained in London and Wolverhampton for his new *Asparagus myriocladus*. It is perfectly distinct from all other species or variety of *Asparagus*, and should rapidly find its way into every garden of repute.

A glare of colour attracted my attention to one end of the flower tent. Away I went to examine what I thought from a distance to be something particularly good; but oh! the disappointment of it. The exhibit proved to be artificial flowers, scarcely the thing for a summer flower show, thought I. I hope others thought so too.—D.

### St. Ives (Hunts), July 24th.

This is a growing society. In the open classes the competition was very keen at this, the latest show, held on Thursday, July 24, and some excellent produce was placed before the judges. In Class 1, for twelve Roses, distinct, Mr. Seabrooke, gardener to Lord De Ramsey, was first; and Mr. J. Barson, gardener to the Earl of Sandwich, Hinchbrook, second. For a group of plants arranged for effect, first, Mr. Barson; second, Mr. Ebsworth. For six stove and greenhouse plants, first, Mr. Ebsworth. Carnation and Sweet Pea prizes went chiefly to Mr. Seabrooke, and Mr. Hibbeard, gardener to H. Gillart, Esq., Abbots Ripton Hall. For a collection of fruit, not less than six distinct kinds, Mr. Barson led, and was closely followed by Mr. T. Lockie, gardener to A. J. Thornhill, Esq., Diddington Hall. Collection of vegetables: both Sutton's and Webb's prizes went to Mr. Barson, closely followed in each case by Mr. Lockie; third, Mr. Humfris, gardener to Sir Arthur Marshall, Buckden Towers, Mr. Lockie was first with Gloxinias and Tomatoes.

### Newcastle-on-Tyne, July 23rd, 24th, and 25th.

On the above dates this show was opened in the Recreation Grounds, in showery weather. The unpropitious atmospheric conditions were the more regrettable since the exhibition itself was of great excellence. The chief feature of the show was the exhibition of herbaceous flowers, and these were even better than they have ever been before; in fact the judges were heard to remark that they were the best shown anywhere, and were simply perfect.

Roses were again a grand sight, all being bright and fresh.

Limited, Chester; J. Thompson and Son, Forest Hall; Arthur Edwards, Notts; J. W. Barber and Bros., Newcastle.

Competitive Exhibits:—Division A (open to all).—Class 1, for a group of miscellaneous plants; Messrs. F. Edmondson, H. H. Hillier, Thos. Patterson, and G. W. Pinkney, were placed in the above order. For six plants in bloom, Messrs. John Harris, J. and J. Ellison, and S. Bewick. Three Orchids: First Mr. O. Lamb, The Gardens, Wiseton, Bawtry, Notts; second, Mr. J. McIndoe. Gloxinias were well shown. Mr. S. Bewick won with fine plants; Mr. J. Farquharson, second; and Messrs. J. Thompson and Son, third. Dracaenas and Crotons were a very moderate lot. For four single tuberous Begonias, Messrs. Hunter, Harris, and Barwick won; and for four double Begonias, Messrs. Hunter,



H.P. Rose, *Gustave Piganeau*. (See page 101.)

Some very fine Carnations were also on view, and a certificate for special blooms was awarded to Mr. James Douglas, of Great Bookham. The judges were Mr. J. Douglas, Surrey; Mr. Henry Hudson, Cragside, Rothbury; Mr. James Hudson, Gunnersbury House, Acton; and Mr. George Paul, The Old Nurseries, Cheshunt, Hertfordshire.

Competitive exhibits were not so numerous as in previous years. The trade element made a brave show, Messrs. Wm. Fell, Hexham, having an excellent stand of their plant specialities; also J. Robson and Son, Hexham; Mr. John Forbes, Hawick, with a superb collection of herbaceous Ploxes, Pentstemons, very fine, and also Carnations. Messrs. Laing and Mather, from Kelso, again showed fine Carnations, and other non-competitive exhibits were set up by Messrs. T. A. Hutchinson and Co., Forest Hall; F. S. Barron, Wisbech; J. J. Barron, gardener to W. F. Henderson, Esq., Newcastle; W. R. Armstrong, Newcastle; Dicksons',

Henderson, and Wilkinson. Six table plants in 6in pots were well shown—Messrs. McIndoe, first; A. Guymer, second; and J. Bewick, third.

The Roses were one of the leading features of the show. For a collection of these, arranged for effect, Mr. Hugh Dickson was first, and Messrs. D. and W. Croll, second. Both lots were beautifully arranged. Messrs. D. and W. Croll won for the thirty-six with wonderfully bright Roses, their best being Captain Hayward, Mrs. J. Laing, Mrs. S. Crawford, and Marquis Litta; R. Harkness and Co., Hitchin, were a good second, with Mr. Hugh Dickson third. Messrs. Harkness won for the thirty-eight Roses with grand flowers of Earl of Dufferin, Mrs. J. Laing, Mildred Graham, Marie Baumann, Mrs. F. Cant, and Bladud; Hugh Dickson, a close second; and Messrs. D. and W. Croll, third. In the class for twenty-four, H. Dickson won and Messrs. Croll second. There was a grand bloom of Caroline Testout in this stand. For twelve



Roses distinct, the order was Croll, Harkness, and H. Dickson. Twelve of one sort, any variety of H.P., Harkness won with splendid blooms of Her Majesty; Croll run them very close indeed with very fine blooms of Mrs. John Laing; H. Dickson being third. Twelve Roses, any one sort of Teas, first Croll; and Jas. Henderson second.

The herbaceous flowers were a treat to see. For twenty-four bunches (more like sheaves of corn than flowers!) the coveted honours fell to Harkness, of Bedale. G. Gibson and Co. and F. Edmondson were second and third. For eighteen bunches hardy herbaceous flowers the same order was followed. Pansies and Violas were well shown by Messrs. Peacock, Brown Bros., and Battersby, who were the successful exhibitors. Six specimen glasses of Carnations were won by J. Thompson and Son, with O. Lamb and H. H. Hillier second and third.

The table decorations were all very fine. For vase or epergne, Mr. Edmondson was again first; M. Purvis, and O. Lamb, second and third. For a vase or epergne, Orchids excluded, Messrs. T. Battersby, George Webster, and M. Purvis were the victors, and these secured most of the succeeding awards.

Fruit, though not plentiful, was very superior, and in good condition considering the season we have had. For a collection of eight dishes, Mr. Wm. Nicholls won with an excellent collection; J. C. Macpherson and J. McIndoe being close up. Collection of four dishes: The prizetakers were W. Fulford, J. McIndoe, and J. C. Macpherson. For four bunches of Grapes, William Mark, J. McIndoe, and Wm. Nicholls, in this order. Two ditto, Mark, Macpherson, and Nicholls. Two bunches black Grapes, Nicholls, Mark, and McIndoe. One Melon, Macpherson, Fairlie, and McIndoe. Dish of Peaches, McIndoe, Macpherson, and Wm. Nicholls. For a dish of Nectarines, J. Farquharson, Nicholls, and McIndoe. One dish of Cherries, Robert Elliott and J. C. Macpherson. Strawberries were very good, but very few dishes were set up. W. G. Macfarlane was first, J. C. Macpherson second. For a collection of four dishes of fruit confined to gentlemen's gardeners or amateurs within a radius of thirty miles of Newcastle, Wm. Fulford was a good first; T. Cowperthwaite second, and Robert Elliott third.

Coming to the Vegetables, for a collection of eight dishes, Thos. Coxon was first, Wm. Hodgson second, and Geo. Patterson third. Messrs. Sutton and Sons gave good prizes for collections of vegetables. Mr. McIndoe carried off first, Mr. Elliott second and Mr. J. E. Macpherson third. Messrs. Webb and Sons also gave prizes, which were won by Wm. Nicholls, J. McIndoe, and Wm. Hodgson, as placed here. Mr. Robert Sydenham gave prizes for a collection of Sweet Peas in twelve distinct varieties, and a very fine exhibit was furnished. Though small in flower, they were extremely bright and fresh. R. Elliott was first, and J. McIndoe second. The amateurs' classes were well represented, both in the cut flower and vegetable sections.—T. BELL.

### Huyton and Roby, Liverpool.

This suburban show is one of several of importance in the Liverpool district and was held on July 24. Four entered for the circular group of plants, honours being somewhat easily taken by Mr. W. Lyon, gardener to A. Mackenzie Smith, Esq., Bolton Hey, Roby. Choice pot Carnations were very noticeable in the second prize group from Mr. George, gardener to T. Henshaw, Esq., Whitefield House, Roby; and handsome Gloxinias and Streptocarpus in the third, from Mr. Harcastle, gardener to Mrs. Harding, Rydal House, Huyton. Mr. Lyon had the best four stove and greenhouse. Mr. Harcastle brought the three best Ferns, Coleus, and Cockscombs, in superior condition. The single Begonia plants and trusses of Pelargoniums from Mr. Bagnall, Charlewood House, Huyton, were worthy of all praise. Mr. T. Eaton, Roby Mount, exhibited fine culture in his three and single specimen Caladiums, a spray of Oncidium Lanceanum gaining the special prize; also for single Orchid with Cattleya guttata. Roses showed a marked improvement, and the prizes in all three classes were captured by Mr. J. Burrows.

The fruit classes came out very strong, and the quality of a high standard. Mr. Oldham, gardener to Joseph Beecham, Esq., Ewanville, Huyton, won with grand Hamburg and Buckland Sweetwater Grapes, and also for the four dishes, Mr. Eaton coming second. The vegetables and Potatoes from Mr. George were of right quality and effectively arranged, the Tomatoes being equally so.

There were many beautiful table decorations, a somewhat sparse arrangement of Marguerites, blue Cornflowers, and Smilax securing the prize for Miss Crippen. The second prizewinner, Mrs. H. Middlehurst, on the other hand, had been somewhat too lavish in her pretty treatment of Iceland Poppies. Lady Derby's prize for the best cottage garden was won by a local postman, Mr. C. Hambleton; and Mrs. Parrington's for the best allotment by Mr. W. Watkin. Choice cut Roses, Sweet Peas, and herbaceous plants came from Messrs. Caldwell and Sons, Knutsford, and a capital contribution of Sweet Peas from Mr. H. Middlehurst, who, with his assistants, carried out the secretarial duties most faithfully.—R. P. R.

### Handsworth (Stafford), July 25th and 26th.

Brilliant weather ushered in the eighteenth annual floral fête of this enterprising society, which proved to be the most successful yet held. The venue was the Victoria Park. It seems not content to grow by steady progress, but to jump up by leaps and bounds, until it promises to be one of the best exhibitions in the Midlands. In fact, so far is this the case that, as was signified by Mr. Richard Dean, of Ealing, when responding to the toast to the judges at the committee luncheon, Handsworth has now the honour of contributing, in association with Wolverhampton and Hanley, in rendering Staffordshire the only county which can boast of three horticultural shows of importance. Handsworth also promises to increase its importance by offering further valuable special prizes next year.

The opening ceremony was performed by Lady Bateman-Scott, supported by a large number of the vice-presidents and a numerous gathering of the élite of Handsworth. The president, Councillor E. J. Abbott, presided at the judges' luncheon, and the toasts were given by Messrs. W. O. Lewis, T. E. Forsyth, and W. Roberts, vice-presidents. The health of the judges was acknowledged by Mr. Richard Dean, Ealing; Mr. A. Young, Witley Court Gardens, and Mr. R. Jones, gardener to Smith Ryland, Esq., Barford Hill, Warwick. To the courteous and able secretary, Councillor John Edwards, and the assistant-secretary, Mr. Joseph Beresford, high credit is due; including also the treasurer, Councillor W. Roberts.

The trade contributions were a marked feature, with Messrs. Webb and Sons (Wordsley), Jarman and Co., Perkins and Sons, D. Prior and Son, Hewitt and Co., H. Deverill, R. Greenfield, jun., J. Cypher, Yates and Son, R. Sydenham, Simpson and Sons, W. L. Pattison (Shrewsbury), T. B. Grove (Sutton Coldfield), Townsend and Sons (Worcester), and Pemberton and Son from Walsall.

First Division:—For a group of plants (30ft by 15ft); first prize £15, the winner to receive a Silver Challenge Cup. The almost invincible Mr. J. Cypher was first; whilst Mr. G. Hancox, West Bromwich, was second. The third prize fell to Mr. W. Vause, Leamington. For twelve stove and greenhouse plants Mr. Cypher won, and W. Vause followed. Roses formed a leading feature. For twenty-four Roses, Perkins and Sons led with the usual exhibition sorts, comprising Her Majesty (fine), Mildred Grant (good), Marchioness of Londonderry (handsome), and Gustave Piganeau (fine). Second, D. Prior and Son, with a very good lot; and third, J. Townsend and Son, Worcester. For twelve Teas, Prior led; and second, Townsend and Son; third, Mr. J. Mattock, Oxford. For twelve bunches garden Roses, the first honours were accorded Mr. J. Mattock.

Carnations and Picotees were finely staged by Mr. R. C. Cartwright (gardener, Mr. R. G. Rudd), who obtained the first and second prizes for twelve yellow grounds or selfs. For twelve white ground or selfs, Pemberton and Son were the only exhibitors. Violas were extensively and exceedingly well staged, Pemberton and Son, for twelve bunches, being first; and second, Mr. E. H. Cheshire, gardener to Mrs. Marriott. Fuchsias, Zonal Pelargoniums, and Coleuses were all very well shown. These, however, are simple to cultivate. Sweet Peas were a very fine and pleasing feature, and the special prizes were well contested. For nine varieties, the first (a Large Silver Medal and 10s.) was won by Mr. J. J. Canning, gardener to Lieut-Col. Wilkinson, with a very good assortment, tastefully arranged. The second prize (a smaller Silver Medal and 7s. 6d.) was won by Mr. J. Innes, gardener to Mrs. Goode; and third, Mr. C. A. Palmer. The whole of the exhibits comprised the leading varieties. A marquee was devoted to table decorations, which formed one of the most attractive features in the show. Seldom have we seen a more creditable and tastefully arranged set of dinner table decorations, thus rendering the judges a difficult task. Miss Cofta and Mrs. Rose were placed thus for a decorated dinner table. For epergnes, Mrs. S. Rose, Mrs. Overton, and Miss Faulkner won in order named.

Plants, cut flowers, fruits, vegetables, &c., were very well shown in other classes; but the exhibits were too numerous to mention, unless it be the collections of fruit in the open classes. In the class for a collection of ten kinds of fruit, J. H. Goodacre, Elvaston Castle Gardens, led. It may parenthetically be observed that a stated number of kinds of varieties, especially at so early a period of the year, would secure a collection more readily forthcoming, and of higher quality, than when unlimited in quantity. The second prize fell to Mr. J. Read, gardener to the Earl of Carnarvon, also with a royal collection. These were the only contestants. Grapes were in most instances remarkably well shown, but the Muscat of Alexandria would have presented the desirable amber tint if reserved till later on in the season. For six bunches of Grapes (three black and three white), the first prize of £5 went to Mr. J. Read; and second, Mr. Goodacre. They were again the only two competitors. There was a goodly competition for the numerous special prizes offered by the trade for various horticultural products.—W. G.

### Southern Carnation (Southampton), July 29th.

The fifth annual exhibition was held in the Pavilion on the pier, and was a great success. In point of quality the blooms quite equalled those recently staged at the show held in the Drill Hall, Westminster. Taken as a whole, the show here was more representative than that in London, while the competition was exceedingly keen. The principal class for flake and bizarre Carnations was that for twelve varieties, one bloom of each, and five competed for the six prizes offered. Mr. F. Wellesley, Westfield Common, Woking, was distinctly ahead with even sized, clean blooms neatly set up, the varieties being Robert Houlgrave, J. S. Hedderley, Robert Lord, Gordon Lewis (very fine), Sportsman, Master Fred (good), George Melville, Arline, Pandora, George, Thalia, and Admiral Curson. Messrs. Thomson and Co., Birmingham, second with an even stand of smaller blooms; and Mr. J. J. Keen, 37, Avenue Road, Southampton, third.

Six competed for the half-dozen, distinct. First, Mr. J. Fairlie, Rothschild's Bank, City, for a capital set; Mr. E. J. Wootton, 35, St. Catherine's Road, Winchester, a good second; and Mr. W. Spencer, jun., Windsor, a close third. White ground Picotees were admirably staged. In the class for twelve, dissimilar, five competed, the first prize falling rather easily to Mr. F. Wellesley for grand blooms of Ganymede, Nellie, Brunette, Mrs. Barron (very fine), and Amy Robsart. The second place was secured by Messrs. Thomson and Co. with an even set; and third, Messrs. W. Pemberton and Son. Seven competed for six, dissimilar, Mr. A. R. Brown, Handsworth, Birmingham, with level blooms of Fanny Tett, Mrs. Beswick, Myra, Heart's Delight, Lavinia, and Isobel Lakin. Second, Mr. W. Spencer; third, Mr. J. Fairleigh.

Yellow ground Picotees were more largely represented than any other section. For twelve, in six varieties, there were seven competitors. Mr. C. Blick, gardener to Martin R. Smith, Esq., Hayes, was distinctly ahead with grand specimens, including varieties named in previous reports. Second, Mr. F. Wellesley; and third, Messrs. C. Turner, of Slough. For six Picotees, no less than eleven competed. Messrs. Blackmore and Langdon, of Bath, won with ease the premier position. Second, Mr. W. Spencer, jun.; and third, Mr. E. H. Buckland, Southgate House, Winchester.

For twelve yellow ground and Fancy Carnations, eight competed, Mr. Blick leading with full solid blooms of Author, Andromeda (fine), Cavalier, Lily, Duchess, Hesperus, and others. Mr. F. Wellesley was a good second; Mr. C. Turner, third. Twelve competed for the six, distinct, Mr. E. J. Wootton being first; second, Mr. W. Spencer, jun.; and third, Messrs. W. Artindale and Son. In the class for twelve Carnations, selfs, distinct, six competed; the best coming from Mr. Blick. Second, Mr. Wellesley; and Messrs. Thomson third. So many as eighteen competed in the class for six Carnation blooms, distinct. Messrs. Blackmore and Langdon secured the leading award for a fine set. Mr. A. R. Brown, second; Mr. W. Spencer, third. Single blooms in their various sections were well represented.

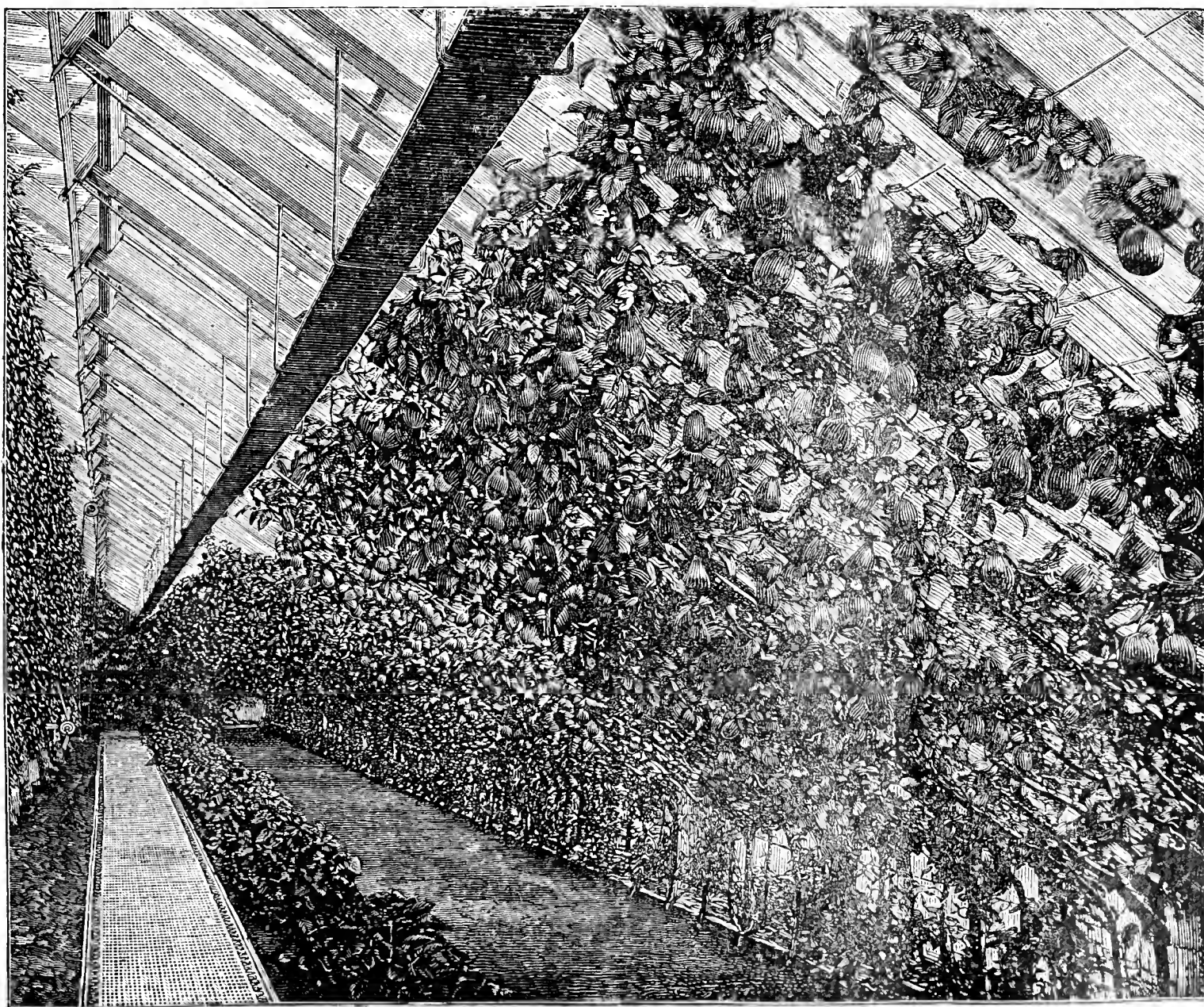
**TABLE DECORATIONS.**—For the best decorated dinner table (Carnations and Picotee blooms only) there were five entries, the first prize being easily secured by Miss Wadmore, Brook House, Basingstoke. Mr. R. H. Jeffrey, Nursling, Southampton, was a good second.

Sweet Peas added much to the attractiveness of the show, so well were they displayed. For nine distinct varieties Mr. A. Maple, Aldermoor, Shirley, Southampton, led with huge bunches of finely grown flowers in popular varieties. Mr. R. H. Jeffrey was a good second.

Non-competitive displays were numerous and added much to the variety and beauty of the show. Foremost was a grand display of Carnations and Picotees from Mr. J. Douglas, Eden-side, Bookham, consisting of many choice and new varieties, such as Aleinous, Rayon d'Or, Lady J. Grey, Gnomon, Ormonde, Countess of Verulam, Argosy, Sappho, and Achilles.

Messrs. W. Cutbush and Son, The Nurseries, Highgate, N., staged magnificent blooms of Malmaison varieties, such as Maggie Hodgson, Juliette, Mrs. Trelawney, Princess of Wales, and Gault. Messrs. B. Ladhams and Son, Shirley, had a grand group of eut herbaceous flowers, and Mr. Amos Perry, Winchester Hill, had also an effective display of hardy flowers and Water Lilies. Mr. W. Garton, Woolston, arranged a charming group of Crotons, Begonias, Geraniums, &c., at the end of the large hall, which were much admired.

*We are obliged to hold over a number of Reports until our next issue.*



Cordon Pears grown under glass.



## Obituary.

### Mr. Elijah Draper.

I enclose cutting from our local paper containing the news of death of our esteemed hon. secretary, the late Mr. E. Draper. I believe it will convey to you more than I can express of the esteem in which he was held by all who knew him, and more especially by lovers of horticulture. By his death the Northampton Chrysanthemum Society have indeed lost an able secretary and most sincere friend.—T. HEMMING, Acting Sec. Northampton Chrysanthemum Society.

"Mr. Draper was for many years schoolmaster at St. Giles' Day Schools, and a number of his scholars achieved prominent positions in various parts of the country. Subsequently he conducted a private school at the Working Men's Club, St. Giles Street, and his considerable talents as a schoolmaster were here again exemplified by the successes of his pupils. In March, 1890, he was elected secretary of the Northampton Town and County Benefit Building Society, in succession to the late Alderman T. Adams, and during the whole time he has occupied that responsible position in this large and important society he has proved himself a most capable, courteous, and assiduous officer. In the period since his appointment the membership has very largely increased, and the receipts have been well nigh doubled. In the last report of the directors it was stated that the society now consists of 3,237 members, holding 7,777 borrowing shares and 6,125 investing shares. Notwithstanding the reports of the depressed state of trade in Northampton, it was recorded that every phase of the society's working showed a distinct improvement on the preceding year. Mr. Draper was also the honorary secretary of the Northants Chrysanthemum Society, having always displayed keen interest in the cultivation of flowers and fruit, and much of the success which has attended the annual exhibitions of the society in the county town is due to Mr. Draper's untiring efforts as secretary. In his early years Mr. Draper took a keen interest in cricket, and later, in addition to the pursuit of horticulture, was fond of angling."

## Trade Notes.

### A New Variety of Galega.

Mr. W. Baylor-Hartland, of Cork, sends us an armful of a new variety of Galega officinalis, which he names bicolor. The standard in each of the flowers is deep mauve-purple, the wings and keel being almost white, but tinged with the mauve. It appears to be very robust, with racemes 7in long, and branched. As a border herbaceous perennial it is distinct and meritorious.

### A Twin Brake Hand Hoist.

This apparatus, fully described as Pickering Twin Brake Quick Hand Hoist, will appeal to our home farmers, land stewards, and the gardeners in very large establishments. We are not able to illustrate the hand hoist here, but on an advertisement page a figure is presented in connection with the London Hoist and Machinery Company's notice, whose address is 103, Worship Street, E.C. The latest development of this well-known Pickering Sack Hoist (upwards of 100,000 have been sold) is in the brake shoe and lever being duplicated, so as to render the lowering equally effectual whichever end of lift chain is in use, thus rendering the hoist free from the jerky action common to the old type. A man has only to exert a pull of a fifth of the load, i.e., 56lb, to raise a sack of Corn at the rate of 20ft per minute. The company's catalogue should be consulted.

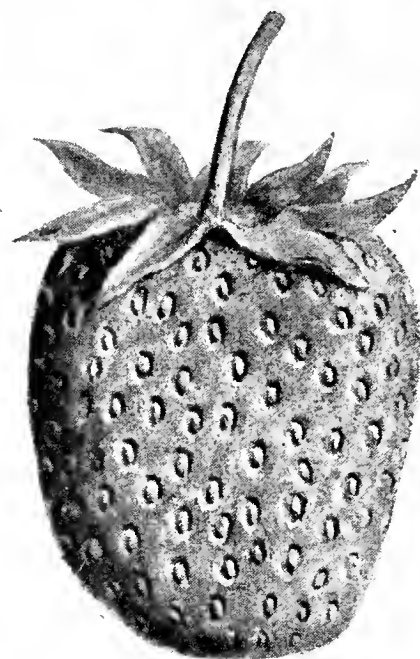
### West's Aërated Spray Syringe.

The above is an invention by Mr. C. E. West, of Roundhay, well known as a leading garden sundriesman, and its great point of merit is that it will save more than half ( $\frac{1}{2}$  it is said) of any insecticide that may be used when spraying plants. The insecticide being mixed with air by the action of the syringe, a deadly insecticide can be used extra strong, and the particles, floating in the air, envelope the whole plant. It acts on the same principle as a scent sprayer; but is worked like an ordinary syringe. West's Aërated Spray Syringe is, indeed, an ordinary syringe, but with an extra cylinder for holding the liquid firmly fastened to it, and is connected to the cylinder by two tubes. As all syringes are powerful pneumatic pumps, and as the water in the cylinder is connected to the syringe in the same way as a scent sprayer is done, when the plunger is worked in the syringe a big force of air is got which aërates the spray in the same way as a scent sprayer, and thus gives off the same kind of spray. But as the syringe is so many times larger and stronger than a scent sprayer, the syringe gives a much better spray and cannot get clogged up, and the cylinder holds as much liquid to last an hour or so of spraying. It can be also used as an ordinary greenhouse syringe, and being serviceable, it can be used to do all the

syringing in a greenhouse. We are also well pleased with Mr. West's fruit gatherer and tree pruner. This is intended for gathering fruit out of reach, and for pruning high branches. His espalier chain and hooks for supporting Raspberries, Currants, Gooseberries, Tomatoes, Roses, and climbing plants also shows considerable originality, and seems very useful.

## Strawberry, Givon's Late Prolific.

This new late fruiting Strawberry received an Award of Merit when shown before the Fruit and Vegetable Committee of the Royal Horticultural Society on July 2, 1901. The same body raised the award to a First Class Certificate at their sitting on July 22, 1902, when some handsome fruits were again set before



Strawberry, Givon's Late Prolific.

them. The fruits are large, broad at the base, and curve to the shoulders. They are of a bright rich crimson-scarlet colour, firm and even, with a luscious, mellow flavour. It is a first-class Strawberry, and a late and heavy cropper. Parents: Waterloo and Latest of All. From H. P. Sturgis, Esq. (gardener, Mr. W. Peters), Givon's Gardens, Leatherhead.

## Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.         | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|---------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|               |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|               |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.         |                    |                         |           |           |           |             |                                       |                |                |                              |
| July.         |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ...20  | N.E.               | deg. 53.9               | deg. 50.3 | deg. 58.0 | deg. 51.2 | Ins. —      | deg. 59.9                             | deg. 60.2      | deg. 57.5      | deg. 45.5                    |
| Monday ...21  | N.                 | 52.1                    | 50.0      | 57.8      | 49.5      | 0.02        | 58.3                                  | 59.4           | 57.5           | 42.5                         |
| Tuesday ...22 | W.N.W.             | 54.2                    | 50.2      | 57.2      | 49.3      | 0.07        | 57.9                                  | 58.9           | 57.3           | 44.0                         |
| Wednesday 23  | W.N.W.             | 56.6                    | 54.8      | 68.3      | 50.2      | —           | 58.2                                  | 58.5           | 57.2           | 42.5                         |
| Thursday 24   | W.S.W.             | 62.1                    | 55.0      | 67.4      | 51.8      | —           | 59.9                                  | 58.8           | 57.2           | 43.3                         |
| Friday ...25  | W.                 | 61.7                    | 56.8      | 68.0      | 54.2      | 0.17        | 61.2                                  | 59.2           | 57.0           | 51.8                         |
| Saturday 26   | S.W.               | 66.2                    | 61.6      | 71.8      | 55.7      | 0.01        | 62.2                                  | 59.6           | 57.1           | 53.0                         |
| MEANS ...     |                    | 58.1                    | 54.1      | 64.1      | 51.7      | Total. 0.27 | 59.7                                  | 59.2           | 57.3           | 46.1                         |

A week of dull cold weather with showers at intervals.

## Trade Catalogues Received.

Damman & Co., Seed and Bulb Growers, Naples.—*Bulbs, Roots, and Terrestrial Orchids.*

John Peed & Son, Streatham Nurseries, Streatham, S.W.—*Fruit Trees, also Roses.*

B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway, London, N.—*Bulbs, &c.*



### Fruit Forcing.

**CHERRY HOUSE.**—The trees have the wood sufficiently ripened and the buds enough plumped to allow of their being fully exposed to the atmosphere. This applies to the house started early in the year, therefore remove the roof lights, which is the best means for arresting premature growth, to which the Cherry when forced year after year successively is liable. The leaves from their hard texture are not very inviting to black aphides, but red spider will prey upon them unless prevented by syringing or an insecticide. Black aphides, however, may appear on any young growths, in which case syringe the points with tobacco water, rubbing the worst infested parts gently between the fingers whilst wet with the insecticide. For red spider, syringe the trees with paraffin emulsion, adding  $\frac{1}{2}$  oz of sulphide of potassium to 3 gallons of the solution, 2oz of paraffin emulsion per gallon of water being used. The border must not be allowed to become parchingly dry, but have copious supplies of water, and if the trees are weakly, liquid manure may be employed, as poverty of bud-perfecting means collapse of the fruit after setting if it gets beyond the blossoming. Trees in pots may be removed from the house, stood on a base impervious to worms, plunged in ashes in a sunny position outdoors, where they must be duly attended to for water, and properly syringed to maintain the foliage in a healthy state as long as possible.

**CUCUMBERS.**—Any house or frame at liberty may yet be planted with Cucumbers, the frame having a bed of fermenting materials which will give a supply of fruit in September, and continue to do so nearly to Christmas if due regard be had to lining the bed and to protecting the plant by mats over the lights at night after the weather sets in cold. Let the growths of plants in frames or houses be thinned at least once a week, and in growing weather twice, removing exhausted growths to make room for young bearing shoots. Keep the growths well stopped to one joint beyond the fruit, or at the fruit if the plants are vigorous and showing no signs of exhaustion. Always allow weakly plants more extension, and crop them lightly. Maintain a temperature of 70deg at night, 75deg by day, 80deg to 85deg with sun, closing early to increase to 90deg or 95deg. Maintain root activity by surface dressings of turfy loam or lumpy sweetened manure, and pay due attention to watering two or three times a week. Syringe in the afternoon of hot days, but avoid late syringing, for the foliage should be dry by sunset. The autumn fruiters should be planted on hillocks or ridges moderately firm, maintaining a moist and genial atmosphere, and they will grow and show fruit in plenty shortly, being far better for a supply of late summer and early autumn fruits than old plants, which produce knobbed, crooked, and otherwise inferior specimens at that season.

**PEACHES AND NECTARINES—LATE SUCCESSION HOUSES.**—Every attention must be given the trees in syringing to keep the foliage free from red spider and in watering the inside borders. It will be an advantage to mulch the borders with short lumpy material, as stable litter freed from the straw; but it must not be used in great amount at a time in the fresh state, or the ammonia vapour will seriously injure the foliage, particularly if the lights for ventilation are kept close, a little air constantly being a safeguard against scorching, soft and attenuated growth. The value of using manure rather fresh, but not rank, as a mulch, is that the ammonia given out is inimical to insects and invigorating to the plants, the waterings making its soluble constituents available for taking up by the roots, and by being lumpy or open atmospheric influences have freer access for effecting the assimilation of food in the soil than when it is practically sealed by a close mass of little manurial value. The shoots must be regularly tied in, allowing space in the ligatures for the swelling of the shoots. To assist the colouring and ripening of the fruits, they should be exposed as much as possible to the influences of sun and air by removing or shortening some of the foliage where too thickly placed. When the fruit is on the under side of the trellis, the shoots may be untied and regulated so as to bring it with the apex to the light, supporting each fruit in position by a lath placed across the trellis. Discontinue the syringing when the fruit commences to ripen, and lessen the supplies of water, but on no account must water be withheld to the prejudice of the health of the trees. A piece of soft netting, such as hexagon, placed below the trellis, and so arranged as to form pockets to save the fruit from a long run against each other, will prevent any fruit being bruised should they fall. Both top and bottom ventilation will be necessary

constantly, except in cold weather, after the fruit commences ripening.

**LATE HOUSES.**—Continue syringing the trees as often as necessary to keep red spider in check, but avoid keeping the foliage constantly moist. Inside borders must be well watered and mulched, avoid making the soil sodden and sour by needless watering. Tie in the shoots regularly and evenly, keeping them rather thin. Stop any gross shoots, or preferably cut them clean out, thereby causing a division and more equalisation of the sap and vigour throughout the tree. When the fruit commences swelling after stoning, and it being desired to accelerate the ripening of the fruit, close the house somewhat early in the afternoon. Let the temperature rise to 80deg, or 85deg or 90deg, ventilating a little before nightfall. Increase the ventilation early, and keep through the day from 70deg to 85deg whenever practicable. The wood is so unripe in many cases that every possible advantage should be taken of the solar heat, alike to perfect the current crop and the wood and buds for the ensuing season, especially in unheated houses.

**MELONS.**—The weather, broiling hot a short time and then cold from the prevalence of north-easterly winds, has not been favourable to late crops in frames, as keeping close means a moisture-laden atmosphere, and gives Melons on manure beds an impulse in the direction of growth. As the fruit sets badly on luxuriantly growing laterals, the growths should be kept rather thin, crowding tending to nothing but disaster. Air a little constantly to prevent the deposition of moisture on the blossoms, which is necessary to secure a good set, affording no more water at the roots than is necessary to prevent flagging of the foliage. Do not neglect to fertilise fully expanded flowers daily, and to go over the growths frequently for the removal of superfluous and stopping the unruly, or to concentrate the nutriment on the fruits, being careful to avoid overcrowding. Copious supplies of water are necessary to plants swelling their fruits, about twice a week in bright weather, once a week, or more distantly, in cold and moist dull weather. Sprinkle the plants at closing time on fine days, those in houses being well syringed both ways in the afternoon of bright days, and a good moisture maintained by sprinkling the floor two or three times a day, damping being all that is necessary in dull weather. Keep the atmosphere dry when the fruit is setting or ripening. Maintain a top heat of 65deg at night, 75deg by day, in dull weather admitting a little air at that if there be a prospect of some sun, increasing the ventilation with the increasing temperature up to 85deg or 90deg, closing sufficiently early to raise the heat to 90deg or 95deg or 100deg. A free circulation of rather dry air and warm greatly improves the finish and quality of Melons when near ripening. If canker appear at the collar, rub quicklime into the affected part until it becomes dry, repeating as necessary, maintaining a drier and better ventilated atmosphere. If there be any indications of the fruit cracking, cut the vine about half way through a few joints below the fruit, reducing the supply of water at the roots, and maintain a dry well ventilated atmosphere, not neglecting to afford some air at night.—**ST. ALBANS.**

### The Kitchen Garden.

**SOWING CABBAGE.**—From the present time to the middle of August may be considered the best period to make the sowing of Cabbage for spring use. Ground should be well dug over to bury rubbish and provide a broken up surface of fresh pulverised soil which can be made fine and level for distributing the seed upon. Should the soil be very dry, and the weather likely to remain hot and dry, a thorough soaking of water ought to be given. Drills may then be drawn, and the seed sown in them thinly, or it may be scattered thinly broadcast. If the latter plan is adopted, cover the seed with a thin layer of fine, dry soil. Good varieties to sow now are Flower of Spring, Ellam's Dwarf Early, Wheeler's Imperial, Enfield Market, Early Offenham. In continued dry weather sprinkle with water to assist germination and early growth.

**PARSLEY.**—Sowings of Parsley made at different times always ensure that a supply of this much esteemed herb shall be forthcoming. After plants commence to throw up flower stems they are seldom worth retaining, and as the oldest beds are sure to do this, fresh sowings must be made to fill up probable gaps in the regular supply. There may not be much fear of shortage at present, but in the winter and early spring the supply frequently runs short. A bed, however, sown now will make excellent growth during the autumn which will last well through the winter. Sow on a plot of good ground in drills 6in apart. The seedlings are readily thinned by this method, and the hoe may be used between the rows.

**CELERY.**—The earliest rows of Celery may receive a final earthing, seeing before doing so that the roots are thoroughly moist. Apply soil round the plants only when they are quite dry. Successional rows also require frequent attention according to the advanced condition of the plants. The second early rows will most likely require earthing another stage, while the rows to



follow should have a little soil broken down round the plants. Trim away suckers or any useless leaves, and soak the plants with water or liquid manure. A sprinkling of soot or artificial manure will be beneficial. Where Celery has been planted between rows of Peas, the old haulm of the latter should be cleared away as soon as possible.

**PLANTING WINTER GREENS.**—Although the main crops of these are in most cases established and making progress, there may be vacancies in the garden which require filling, and as green vegetables come in exceedingly useful in spring it is advisable to plant freely. The best of the plants from the seed beds or nursery quarters should be inserted, affording them abundance of liquid manure to give them a start. Coleworts can be planted in rows a foot apart, and Borecole of various varieties are useful to plant now, giving them double the distance.

**TOMATOES.**—In warm and favourable weather for the setting and swelling of the fruit frequent attention must be given to the regulation of growth, and duly supplying water to the roots, as well as applications of a variety of liquid manure sustenance. Plants bearing a heavy crop demand considerable assistance other than that supplied by clean water and the soil they are growing in. The liquid obtained by soaking cow, sheep, or horse droppings is suitable, as well as the drainings from stables, cowsheds, or that collected in a farmyard cesspool. Dilute to a safe strength, and give it when the soil about the roots is moist, not dry. Soot water is good as a change, also a solution of guano or artificial manure. Very heavy bunches of fruit should have some support to prevent the stem tearing away. A layer of manure over the roots as a mulching will serve to keep them cool in hot weather.—EAST KENT.



\* \* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**BOOK WANTED** (E. Cooper).—The little book ("Fruit, Nuts, and Vegetables") has no definite address imprinted; but we believe the author (Mr. Albert Broadbent) is to be found at 19, Oxford Street, Manchester. We have written there to inquire.

**GROWTHS OF PINUS DESTROYED** (A. H.).—There was not any caterpillars or "grubs," but some pupæ, or chrysalids and a few moths. The moth is the Pine-shoot Tortrix Moth, *Retinia buoliana*, which are to be found during July and August about young Pine trees of various kinds. The female lays her eggs between the buds at the ends of the boughs. The caterpillars, which hatch late in the summer, gnaw these so as to cause a flow of turpentine that gives them a slight coating, and here the caterpillars hibernate. In the following spring when the trees begin growth the caterpillars attack the shoots nearest or one side of them, and are to be found under a kind of web and turpentine that flows from the wound. The caterpillars are to be found from September to May or June, and on ceasing to feed they change at the same spot to chrysalids or pupæ, the cases of which are brown or brownish yellow, blunt at the tail, and furnished on the abdomen with prickly-like processes pointing backwards. They are to be found in June or July, and in about a month the moths appear. In the dusk of the evening the moths sport round the tops of the young Pines, out of which they have emerged from the pupæ-cases; but by day they rest, and are not easily seen from their similarity in colour to the withered shoots of which they have been the cause. This species of *Retinia* is common wherever Pine trees are to be found, from the north to the south of Europe. As regards remedy and preservation, the keen eye will be on the state of the buds or shoots, and when these show the caterpillars or pupæ to be present the parts should be carefully removed so as not to injure the remaining shoots, and all these infested pieces should be burnt. This will lessen the amount of future attack, and the earlier it is done in the season the better. If pieces of tin, about a foot long and 2in or 3in wide, are smeared with a sticky substance and placed in the outer forks of the branches during July and August many moths would be captured, and it is likely that spraying the trees with Paris green, one ounce to ten gallons of water, at the end of August, and again at the middle of September, would give the caterpillars a final meal.

**MANGOES SOLD IN MARKETS** (Pomello).—The Mangoes you notice in the market reports are not grown in England, but are imported, being grown in tropical countries. Indeed, the Mango tree, *Mangifera indica*, is not often seen in England, though it has been grown and its fruit occasionally brought to perfection. It is a stove evergreen tree attaining to a height of 60ft.

**KEEPING OFF FLIES** (A. L.).—We do not know of any substance that would prevent flies teasing farm or garden hands while at work. In your part of the country midges are often an intolerable nuisance, and though we tried smearing with tobacco juice and quassia extract found little benefit.

**THISTLES AND NETTLES IN GRASS** (Idem).—The best method of eradicating Thistles and Nettles in grass fields is to pull the former up by means of Thistle pincers as fast as they appear, and to stub up the Nettles by means of a mattock or drag hoe, removing all the creeping stems, and when sufficiently dry burning them. If you cannot do this, cut them off with a scythe as frequently as possible during summer, in no case allowing to get beyond the showing for flower stage. The frequent and continued cutting off weakens the stolones and the growth of the grass may be encouraged by liberal dressings of nitrate of soda and sulphate of ammonia in equal parts, mixed, applying 2½ cwt per acre.

**REMOVING THE BERRIES FROM ASPARAGUS PLANTS** (G. F. O. B.).—It is a good practice to strip off all the berries, as the production of seed weakens the plants more than anything, appropriating the matter that would otherwise go to the formation of good crowns and bold buds, upon which depends the production of early and fine heads in the following spring and early summer. We have found it necessary to strip off the berries every year as soon as formed, and thus give the plants the whole benefit of their resources in order to yield the finest heads. These pay best in our experience, and amply compensate for any outlay in removing the berries betimes.

**NAME OF CATERPILLAR** (K. A.).—The specimen sent is a caterpillar of the puss moth, about two-thirds grown. It feeds in July and August upon Poplar, Willow, or Alder, occasionally upon Apple. It is one of our most singular caterpillars, and has been fancied to have some resemblance to a cat; the moth also when looked at from below, as when seen through a pane of glass, has a furry aspect which is suggestive of a white cat. The head of the caterpillar is retractile, and while resting it draws this back into the thickened neck, and lifts the harder segments of the body. At the anal extremity are two curious horns, containing inner horns or "tentacula," which the creature flourishes if annoyed, but they are quite harmless. Under the chin, however, is a red slit, from which it can discharge an acid fluid as a defence. When adult it constructs a cocoon of gummy silk, into which fragments of wood are inserted, and which becomes very hard. The moth emerges during the early summer.

**MELONS TURNING YELLOW AND DECAYING AT BOTTOM AND TOP** (Raspail).—The most common cause of the fruit swelling up to netting size and then turning yellow and rotten at the stalk and eye is an excessive supply of water at the roots and too close and cold condition of the atmosphere, moisture resting on those parts, and attack by a fungus is thus greatly facilitated. Some varieties, however, are more subject to the disease than others, the very hard rinded and close netted sorts being most liable to attack. The only preventive is to maintain somewhat drier and warmer conditions of the atmosphere after the fruit has become full sized, and supply water at the roots only to keep the foliage from flagging. As the plants have different constitutions, some have the fruits in the state you name, and others are quite exempt. If moisture were kept from the fruit they would not probably be infested by the fungus, a species of *Gleosporium*, closely allied to *G. fructigenum*, and producing a bitter rot.

**PROPAGATING STEPHANOTIS** (Raspail).—This beautiful and very popular stove plant is increased by cuttings of the previous year's growth, inserted singly in pots, in spring, and placed in a close frame with a temperature of not less than 60deg. When rooted and growing freely they should be potted on, and when becoming large or well established do best planted out in a bed of prepared soil, it succeeding best in turfy loam. A bed about 3ft square will suffice for a large plant, the growth being trained to a trellis beneath the roof. The Elvaston variety is a very proliferous form. The best way to pack the trusses of bloom is in shallow wooden trays just sufficiently deep to hold them erectly and packed closely together, a little washed moss being placed on the bottom, then cover with tissue paper, and on that a layer of wadding, so that all may be kept secure. The trays are then fitted into a box two or three deep and securely fastened and labelled. It is not advisable to do more than place the truss ends in water, so as to have the blooms quite fresh when packed, but these dry on the surface. In this way we have despatched large quantities; but there may be other modes of packing which some correspondent may oblige with particulars of.

**VARIETIES OF PEACHES (X. Y. Z.).**—Royal George, Crimson Galande, Diamond, Bellegarde, and Sea Eagle are all good sorts, and should suit your purpose.

**BOOK ON GENERAL FARMING AND AGRICULTURE (J. D. B.).**—Dr. Frean's "Elements of Agriculture" (John Murray, London. 3s. 6d. net.) is the best, and may suit you.

**ADDRESS OF SCOTTISH HORTICULTURAL ASSOCIATION (Wm. Dalrymple).**—The secretary's name is Mr. Peter Loney, and his address 6, Carlton Street, Edinburgh, to whom you should write. The association's meeting rooms are at 5, St. Andrew Square, Edinburgh.

**GRAPES SPOTTED (J. T.).**—You are quite correct in assuming that the syringing with "hard" water after the fruits were colouring has been the cause of the blemishes. Of course, the berries are good, only their appearance is much spoilt through having the bloom mostly washed off. Did you read "H. D.'s" notes on syringing Grapes, on page 24, July 10?

**SUB-TROPICAL GARDENING (A. Edwards).**—Most garden manuals deal with the subject. Mr. Robinson's "English Flower Garden" supplies the information you want; price 15s. "London Parks and Gardens," from this office, though out of date may give you some guidance. Watch the gardening journals for reports of the bedding in London parks.

**COTTONY SUBSTANCE TAKEN FROM OFF ROSE TREE (C. C. E.).**—The brown bodies enveloped in cottony matter are very hard, and evidently the seeds of some member of the natural order Salicaceæ, either a species of Populus or Salix, we think the latter. Its presence on the Rose tree may be due to the agency of wind, or, as sometimes occurs, that of insects, such as the Rosechafer (*Cetonia aurata*) and Bracken Clock (*Phyllopertha horticola*). The holes in the leaflets are due to the punctures of some insect, possibly those of some beetle, but there is no presence of the malignant body.

**PARASITIC GROWTH ON RASPAIL PELARGONIUMS (Raspail).**—According to your description we think the plants were last year infested with one of the Didders, Cuscutæ, which, as you say, produces thread-like filaments with little blooms here and there, the growths attaching themselves to the stalks or leaves, drawing all the life out of the plants. The cause is because the seeds of the parasite were present in the soil, and these germinated, and the growths attached themselves to the Pelargoniums and abstracted nourishment from them by means of its absorbing roots pushed into the stems. The only way to get rid of the pest is to remove every particle of growth before it comes into flower, not leaving any on the plant, otherwise seeds would be formed, and going over with the soil again spring up the following season. Perhaps it was originally introduced in the soil used for potting, being the Lesser Dodder, *Cuscuta Epithymum*, sometimes common on leguminous plants, and the seeds taken along with turf used as compost for potting plants. If you use soil from a similar source, we should advise it to be baked before use, otherwise keep a sharp look out for the parasite and remove it promptly.

**MEASUREMENT OF HAY-STACK (A. L.).**—(1) The hay-stack, 13yds long, 6yds wide, and 5yds deep, will contain 390 cubic yards, and the weight may be 1 cwt. or two truss per cubic yard, hence 19 ton the weight of the stack. Both, however, are very vague, therefore to measure a hay-stack having a rectangular base, and when the stack is straight from the bottom to the eaves, and from the eaves to the top, proceed as follows: (1) Multiply the mean length of the bottom by the mean breadth, and the product will be the area of the bottom. Find the area of a section of the eaves in the same manner. Multiply half the sum of the length of the bottom and eaves by half the sum of the breadths, and the product will be the area of a section equally-distant from the bottom and eaves. To the area of the bottom add the area of the section at the eaves, and four times the area of the middle section, multiply this sum by the perpendicular height from the bottom to the eaves, and 1-6th of the product will be the solidity of the lower part. (2) Multiply the breadth at the eaves by the perpendicular height from the eaves to the top, and half the product will be the area of the end, which being multiplied by the mean length will give the solidity of the upper part. (3) Add these two solidities together, and the sum will be the contents of the whole stack. To get at the actual weight: Cut out a portion extending to the centre of stack, from top to bottom, and weigh it, and also measure the vacuity from which it is taken; then say, as the content of this part is to its weight, so is the content of the whole stack to its weight. The portion to be weighed should not be cut off the end, but taken out about half-way between the end and the middle, where it may be supposed the hay is of medium density.

**MOWING MACHINE (Idem).**—Both the mowing machines you name are excellent, and you would not do wrong in selecting either that of Shanks', which has cog movement, or that of Green's, with chain working. We have used both and found them first rate.

**NAMES OF PLANTS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. R. E.).—1, *Deutzia crenata*, fl.-pl.; 2, *Rhus Cotinus*, the Smoke Sumach; 3, *Spiraea discolor*. (H. W. Kent).—1, *Oenothera Youngii*; 2, *Funkia Sieboldiana*; 3, *Spiraea Anthony Waterer*; 4, *Spiraea Douglasii*; 5, *Lythrum Salicaria*; 6, *Centaurea macrocephala*; 7, *Alstroemeria aurantiaca*; (no number) *Chrysanthemum lacustre*. (E. P. Windermere).—1, *Deutzia crenata*, fl.-pl.; 2, a bright green form of the Portugal Laurel (*Laurus lusitanicus*); 3, *Begonia Daviesii*. Other correspondents next week.

**EDITORIAL NOTICE.**—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

## Covent Garden Market.—July 30th.

### Average Wholesale Prices.—Fruit.

|                           | s. d. | s. d.   |      | s. d.                   | s. d.        |
|---------------------------|-------|---------|------|-------------------------|--------------|
| Apples, Tasmanian ...     | 11    | 0 to 15 | 0    | Lemons, Messina, case   | 12 0 to 20 0 |
| Bananas ...               | 8     | 0       | 12 0 | " Naples, "             | 25 0 0 0     |
| Cherries, English,        |       |         |      | Melons, each ...        | 1 6 2 0      |
| ½-sieve ...               | 8     | 0       | 12 0 | Neectarines, doz. ...   | 3 0 12 0     |
| Currants, red, ½-sieve    | 5     | 0       | 6 0  | Oranges, case ...       | 12 0 16 0    |
| " black, "                | 9     | 0       | 10 0 | Peaches, doz. ...       | 3 0 12 0     |
| Figs, green, doz. ...     | 2     | 0       | 4 0  | Pines, St. Michael's,   |              |
| Gooseberries, ½-sieve ... | 4     | 0       | 5 0  | each ...                | 2 6 5 0      |
| Grapes, Hamburgh, lb.     | 0     | 9       | 1 6  | Plums, Orleans, ½-sieve | 8 0 9 0      |
| " Muscat ...              | 2     | 0       | 3 0  | Raspberries, peek ...   | 3 0 4 0      |
| Greengages, ½-sieve ...   | 8     | 0       | 9 0  | " lb. punts, doz.       | 3 0 4 0      |

### Average Wholesale Prices.—Vegetables.

|                         | s. d. | s. d.  |     | s. d.                  | s. d.      |
|-------------------------|-------|--------|-----|------------------------|------------|
| Artichokes, green, doz. | 2     | 0 to 3 | 0   | Lettuce, Cabbage, doz. | 0 6 to 0 0 |
| " Jerusalem, sieve      | 1     | 6      | 0 0 | " Cos, doz. ...        | 0 9 1 0    |
| Batavia, doz. ...       | 2     | 0      | 0 0 | Marrows, doz. ...      | 3 0 0 0    |
| Beans, French, lb. ...  | 0     | 7      | 0 9 | Mint, doz. bun. ...    | 4 0 0 0    |
| " broad ...             | 3     | 0      | 4 0 | Mushrooms, forced, lb. | 0 8 0 9    |
| Beet, red, doz. ...     | 0     | 6      | 0 0 | Mustard & Cress, pint. | 0 2 0 0    |
| Cabbages, tally ...     | 5     | 0      | 0 0 | Parsley, doz. bnchs.   | 3 0 0 0    |
| Carrots, new, bun. ...  | 0     | 2      | 0 3 | Peas, blue, bushel ... | 3 0 4 0    |
| Cauliflowers, doz. ...  | 3     | 0      | 0 0 | Potatoes, English,     |            |
| Corn Salad, strike ...  | 1     | 0      | 1 3 | new, cwt. ...          | 6 0 7 0    |
| Cucumbers doz. ...      | 2     | 6      | 4 0 | Radishes, doz. ...     | 1 0 0 0    |
| Endive, doz. ...        | 1     | 6      | 0 0 | Spinach, bush. ...     | 2 0 3 0    |
| Herbs, bunch ...        | 0     | 2      | 0 0 | Tomatoes, English, lb. | 0 4 0 5    |
| Horseradish, bunch ...  | 2     | 6      | 0 0 | " Jersey ...           | 0 4 ½ 0 5  |
| Leeks, bunch ...        | 0     | 1 ½    | 0 2 | Turnips, bnch. ...     | 0 2 0 3    |

### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                           | s. d. | s. d.   |      | s. d.                   | s. d.      |
|---------------------------|-------|---------|------|-------------------------|------------|
| Aralias, doz. ...         | 5     | 0 to 12 | 0    | Fuchsias ...            | 4 0 to 0 0 |
| Araucaria, doz. ...       | 12    | 0       | 30 0 | Grevilleas, 48's, doz.  | 5 0 0 0    |
| Aspidistra, doz. ...      | 18    | 0       | 36 0 | Hydrangea, pink ...     | 10 0 12 0  |
| Crotons, doz. ...         | 18    | 0       | 30 0 | Lycopodiums, doz.       | 3 0 0 0    |
| Cyperus alternifolius     |       |         |      | Marguerite Daisy, doz.  | 4 0 6 0    |
| doz. ...                  | 4     | 0       | 5 0  | Mignonette ...          | 6 0 0 0    |
| Dracæna, var., doz.       | 12    | 0       | 30 0 | Myrtles, doz. ...       | 6 0 9 6    |
| " viridis, doz. ...       | 9     | 0       | 18 0 | Palms, in var., doz.    | 15 0 30 0  |
| Ferns, var., doz. ...     | 4     | 0       | 18 0 | " specimens ...         | 21 0 63 0  |
| " small, 100 ...          | 10    | 0       | 16 0 | Pandanus Veitchi, 48's, |            |
| Ficus elastica, doz. ...  | 9     | 0       | 12 0 | doz. ...                | 24 0 30 0  |
| Foliage plants, var, each | 1     | 0       | 5 0  | Shrubs, in pots ...     | 4 0 6 0    |

### Average Wholesale Prices.—Cut Flowers

|                           | s. d. | s. d.  |      | s. d.                    | s. d.        |
|---------------------------|-------|--------|------|--------------------------|--------------|
| Arums, doz. ...           | 3     | 0 to 0 | 0    | Lily of Valley, 12 bnchs | 12 0 to 18 0 |
| Asparagus, Fern, bnch.    | 1     | 0      | 2 0  | Maidenhair Fern, doz.    |              |
| Bouvardia, coloured,      |       |        |      | bnchs. ...               | 4 0 5 0      |
| doz. bunches ...          | 6     | 0      | 8 0  | Marguerites, white,      |              |
| Carnations, 12 blooms     | 0     | 6      | 1 0  | doz. bnchs. ...          | 4 0 0 0      |
| Cattleyas, doz. ...       | 12    | 0      | 15 0 | " yellow, doz. bnchs.    | 2 0 0 0      |
| Cornflower, doz. bun.     | 1     | 0      | 1 6  | Myrtle, English, per     |              |
| Croton foliage, bun. ...  | 0     | 9      | 1 0  | bunch ...                | 0 6 0 0      |
| Cycas leaves, each ...    | 0     | 9      | 1 6  | Odontoglossums ...       | 4 0 0 0      |
| Cypripediums, doz. ...    | 2     | 0      | 3 0  | Orange blossom, bunch    | 2 0 0 0      |
| Eucharis, doz. ...        | 2     | 0      | 3 0  | Roses, Niphetos, white,  |              |
| Gardenias, doz. ...       | 2     | 0      | 2 6  | doz. ...                 | 1 0 2 0      |
| Geranium, scarlet, doz.   |       |        |      | " pink, doz. ...         | 2 0 0 0      |
| bnchs. ...                | 4     | 0      | 0 0  | " yellow, doz. (Perles)  | 1 0 2 0      |
| Gladiolus, white, doz.    |       |        |      | " Generals ...           | 0 5 0 6      |
| bunches ...               | 6     | 0      | 0 0  | Smilax, bunch ...        | 2 6 3 0      |
| Gypsophila, doz. bun.     | 3     | 0      | 0 0  | Stephanotis, doz. pips   | 2 0 0 0      |
| Ivy leaves, doz. bun. ... | 1     | 6      | 0 0  | Stock, double, white,    |              |
| Lilium Harrisii ...       | 2     | 0      | 3 0  | doz. bun. ...            | 2 0 3 0      |
| " lancifolium alb.        | 1     | 0      | 1 6  | Sweet Peas, white and    |              |
| " l. rubrum ...           | 1     | 0      | 1 6  | coloured, dozen bun.     | 1 0 2 0      |
| " longiflorum ...         | 2     | 0      | 3 0  | Tuberoses, dozen ...     | 0 3 0 4      |





## The First and the Last.

1839—Oxford.

Carlisle—1902.

We are sorry to have to write it—the last itinerant show of the Royal Agricultural Association Society of England is over. For good or ill, the show for the future is to be a fixture. We are not going to discuss the wisdom of such a move on the part of the directors, they are wiser men than we, but we do regret that financial losses are causing this change.

When the idea of an exhibition of agricultural stock was first propounded in 1838, it was thought that agriculturists would benefit more and become more widely interested in the work of the society if the meetings were held alternately at some large town, the centre of an agricultural district. The show was to be brought to the people, not the people to the show. From our own experience, we admit that there have been in our lives no pleasanter outings than those we have taken in connection with our visits to the Royal Agricultural Show. Farmers have always had the credit of being very conservative in their ways and methods, but surely nothing will so much tend to open the eyes of their understanding as ocular demonstration as to how work was done in counties other than their own.

As judges, or as ordinary visitors, one comes in touch with the farmers of the district. Often most handsomely entertained by fellow craftsmen, then we, in our turn, were, on a suitable opportunity, only too glad to return the hospitality we had enjoyed. Such meetings surely do much to strengthen the bonds of fellowship and good feeling.

But let us go back to Oxford in 1839. Can we picture an England without railways and without penny postage or telegrams? What a funny show ground it would be, and how primitive the arrangements? The first president was Lord Spencer. The show was to last, as far as we can make out, three days. The ground covered by exhibits was seven acres, and the attendance was stupendous! Yes, when we consider that the stock had either all to travel by road or canal boat, or, indeed, have the terrors of a sea passage, and that coaches, gigs, and saddle horses brought the spectators, it was a tremendous affair, so much so that folk of that day prophesied that never again would England see the like. The show proper seems to have been rather a secondary consideration. It was a special feature in the annual meeting where agriculturists from all parts gathered to read and discuss papers, and to have a good jollification generally.

One feature of the old system we should not care to see revived. The judges arrived at their decisions in private. Now the judging is one of the best parts of the entertainment, and the company round the big rings are always more than ready to let the judges know at once what they think of their awards. Mind, we do not think the public have any business so to express themselves, but they will do it whether or no. There were twelve classes, and they were thus divided:—I., Shorthorns; II., Herefords; III., Devons; IV., Cattle of any other breed; V., Dairy cattle; VI., Oxen; VII., Horses; VIII., Leicester sheep; IX., Southdown or other short-woolled sheep; X., Long woolled; XI., Pigs; XII., Extra stock, implements, roots, and seeds.

Perhaps in this list the two things that strike us most is the class for oxen, and the fact that horses are all put under one heading in Class VII., just two varieties, cart stallion, cart mare and foal, and stallion for breeding hunters, carriage horses, and roadsters. The cart stallion produced ten entries; mare and foal, six entries; and of the rest eight comprised the lot, and so without value that no prize was awarded! Can this be possible!

Among the instruments was from Jersey a small one-horse plough for setting Potatoes. This must be a misnomer, for we have not yet got a plough to do this work. The great Ipswich firm was well represented. A scorcher machine was exhibited, and we will own at once we thought it was some sort of horse singer; but we were quite out of it, as, on reference to the account of the show, it was a machine to burn up weeds as they grew.

At this exhibition we find Thomas Bates was present, and he brought with him, partly by sea, partly by canal, the great fore-runners of his wondrous Shorthorns, such cattle as had never

been seen before. We almost fancy no "Booth" blood was invented then, and the Collings Brothers had both joined the majority. There is in the "Royal Agricultural Society's Journal" for June, 1894, an amusing print of the Oxford Show ground, with gentlemen in white trousers and tail coats. The attendance on the first day was 20,000. The prize sheet amounted to £890. At the Oxford meeting it was decided that the next show should be held at Cambridge in 1840, and we see the resolution was most cordially received by Mr. Jonas Webb. This was in 1839, and we believe another Jonas Webb was on the Committee of Management at the Carlisle Show of this year.

Now let us turn to Carlisle. The president this time is of higher rank than a belted earl—the King's brother-in-law, Prince Christian. Instead of a ground of 7 acres, we fancy 50 is more like the size now, and instead of an attendance of 20,000 the committee are hardly satisfied with an aggregate of 93,600, and many of these enter at 5s. apiece. In 1839 the whole number of classes was only 12; in 1902 the horses alone are divided into 15 classes, and number 521. The cattle, which are grouped under 19 heads, add up to 667. Sheep, which were but of three varieties, have now swelled to seventeen, and number 546. Pigs, poultry, and produce are respectively 178, 653, and 461. Then there is the working dairy with practical demonstration, the competition of shoeing smiths, the bee driving, and the butter making competition. We have also the enormous army of implement makers, all the seedsmen, Royal and otherwise, all the patent cattle medicines, all the cake and feeding manufacturers, all the dairy and bee appliance, and poultry requisite caterers; in fact, we hardly dare venture to hint at what is *not* there. Sheep dipping and clipping, home and foreign. You can insure yourself, your workmen, and your stock on the grounds, and those who own a motor car can include it if they like. There is every sort of cheese and every variety of butter, with good wholesome cider and perry.

To get some idea of what there is to see on a Royal show ground, a glance through the thick catalogue will be a revelation. Perhaps the greatest attraction is the butter working tent, or rather, the competitive dairymaids. It takes a good deal of nerve to go quietly on with the work before the curious gaze of the assembled multitude—almost as nasty a job as facing the enemies' guns in South Africa.

Just think of the number of visitors, that is a sight in itself; prince and peasant, town worker and plough-boy, duchess and dairymaid (we were going to say all interested in agricultural work, but we hold our pen, that would be a too sweeping assertion). That it is a grand holiday outing for the adjacent country side none will deny, and, unlike many outings, it combines "instruction and amusement hand in hand." We wish good luck to the new venture; but we part most reluctantly with the old order of things that made the Royal Show a movable feast.

## Work on the Home Farm.

Though there have been showers and rumours of showers in parishes not far distant, and the papers have been reporting the abandonment of cricket matches, we have had a fine week, and have much good solid work to show for it. The hay is all well saved, and the condition is most excellent. Except in a few early cases, hay has been well got all round Doncaster way.

Good progress has been made amongst the Turnips, but much remains to do. Common Turnips are nearly all struck out, and then we can turn attention to Swede cleaning, which is badly in want of it. The young plants and weeds left in the rows grew so rapidly during the wet of a fortnight ago that the horse hoes could not properly contend with them. The Swedes have since then made great headway, and will soon cover in, so the last weeding is most urgently required.

Mangolds are looking grand, but here again there are a few ugly weeds showing, and they will need another looking over.

As the ears increase in weight the Corn crops show signs of going down without any provocation from showers or storms. A number of fields about here will not need a drop of rain before harvest; nay! they will be better without it. Barley is particularly heavy and thick, and it is certainly the crop of the year.

The interval between the hay and Corn harvests gives us a chance to rest some of the horses. The mares (with foals) which have been doing light work may now be turned right away to richer grass in the carse, also the two and three-year-olds which need rest more than the mares do.

Farmers are in some cases selling their wool. A neighbour has just let his two years clip go for 16s. 6d. per tod for hogg wool, and 10s. per tod for ewe. What a wretched figure! How many shillings per quarter increase on Wheat would be required to make up the wool deficiency? Surely the British public buys its raw woollen material so cheaply it must not grumble at another ½d. on the loaf. What are blankets worth now?

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## Journal of Horticulture.

THURSDAY, AUGUST 7, 1902.

### The Ivy.



IVY is a truly British plant, and seems interwoven with our history from its earliest periods. Less honoured than Oak, and less gloomy in its associations than the Yew, it is more immediately connected with our homes than either of these. Its adaptability to all situations and to the climate of all parts of the country is likewise a great recommendation to favour. In one place we see it covering the ground with a dense carpet, in another ascending the loftiest tree, and in both maintaining itself against all intruders. It frequently mantles our dwellings, and, by the natural armour which it affords, those no longer tenanted are to a great extent preserved from the attacks of time. To it the venerable appearance of many a ruin is as much due as to the masonry; to it many a rocky eminence owes much of its beauty; and an old tree acquires a new interest when its trunk and limbs become clothed in the evergreen drapery of the Ivy. I must now proceed to the details of its culture and uses, and endeavour to name a few of the many purposes for which it may be employed.

As regards culture, the Ivy is by no means particular, for it will live, nay, thrive, in situations unfavourable to most plants, and differing widely from each other; but in general it succeeds best in a dry soil containing plenty of stones. I may here observe, by way of parenthesis, that the utility of stones in land is not sufficiently recognised. Ivy thrives amongst such materials, but it is often enough found growing freely on clayey soils; and, in fact, it is common to plant it in any situation where it is wanted without any preparation whatever. Shade, however, seems to encourage its growth, and it will

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usually do better against the north than the south side of a house. Moist shady woods also not unfrequently abound in Ivy. I believe that it is likewise plentiful in soils containing a good proportion of calcareous matter. It will, however, do well in some soils of an opposite nature; and, indeed, it is so obedient to the requirements of the cultivator that it may be made to succeed almost anywhere, and that with a very small space for its roots to run in. It will, in fact, struggle for a living in ground closely matted with the roots of plants.

The propagation of the Ivy is exceedingly easy and rapid. Seed is abundantly produced, and it germinates freely enough—too much so in some cases. Plants may also be raised in abundance from cuttings, or rather slips, put into the ground almost at any time, but certainly the autumn is the best period for doing so; while if valuable kinds be trained over the ground and pegged down, roots will be emitted at each joint. In this case, if the shoots be cut through some time before the plants are removed, the latter will be much improved in strength. These modes will generally be sufficient to increase this plant to any reasonable extent. Autumn I believe to be the best time to plant Ivy, but I have met with good success by planting in May, while March is perhaps the worst period; but plants in pots may be turned out at any time, and where only a few are to be planted it is best to obtain such, as they become more speedily established, and commence growing sooner.

With regard to trimming the Ivy, I by no means agree with some instructions as to the proper time for doing so in the south and more favoured parts of England, though the case may be different in the north, where the plant is less robust. The plan we adopt here is to cut in closely the Ivy covering dwelling-houses in the beginning of August, very often scarcely leaving a leaf, and yet the whole plant is again densely covered with foliage five or six weeks afterwards; and the season being then too far gone, the growth is confined to leaves, which, with us, become firm and established before winter, so as to sustain no injury from frosts. Thus the Ivy looks trim and neat up to the following June, when the summer shoots begin to elongate. It will be seen that there is with this plan a period of fully eight or nine months in which the plant looks as trim and uniform as the wall against which it clings, while the remainder of the time may be divided about equally between the period of the shoots growing in early summer and that of the formation of foliage in the latter part of the season. Now, let us see what are the effects of cutting Ivy in March. The formation of fresh foliage or shoots will then take about the same time as in the former case, while the period during which the Ivy forms a close carpet is very short indeed. Shoots of some length are formed, and these, remaining unshortened until the following March, are often in the way when a trim and symmetrical appearance ought to prevail.

As to the propriety of covering a dwelling-house with Ivy, there are various opinions, many contending that appearance is the only recommendation it has; but to trees it is very injurious, many an Oak has been strangled in its embraces, and Pinuses suffer still more. Within a very few yards of where I write, a Spruce Fir upwards of 70ft high has been for some years struggling for an existence, which is gradually drawing to a close. A few small patches of green on the tips of some of its branches are all the signs of life which it exhibits. The tree may survive one more year, while the mantle of Ivy triumphantly takes possession of the whole of the trunk; the Ivy branches, dense as Box, protrude in all directions, forming an elongated cone of greater symmetry than ever the Spruce did in its best days. The Ivy has not taken possession of any of the dead branches, although many of them are from 4in to 6in in diameter at their base; but the creeper apparently disdains to trust them as supports, and confines itself to the trunk. This support, however, will also have an end, for we have lost several trees, which had become quite denuded of branches, and only presented a beautifully tapering Ivy-covered spire. The trunk of the tree, when deprived of its vitality, can no longer resist decay, and when it becomes too weak to withstand a high wind, its load brings the whole down. Even Spruce and Larch trees containing from fifty to a hundred or more cubic feet of timber, are not proof against the elements.—J. R.

## Winter and Spring Stocks.

During the summer months Stocks of Ten-week and Intermediate strains stand in the front rank among annuals for the garden and lawn beds and borders. Though so much thought is given them for summer use, there does not seem the same attention paid them generally as a greenhouse subject, a purpose for which they are so well fitted. Not only do they afford decorative material for the greenhouse, conservatory, or dwelling-room in pots, but for vases and florists' work they are equally adapted and much valued. There are now fortunately a good range of suitable selections for pot work varying in style or colour. Some are tall and branching, like Princess Alice, for instance, while others are dwarf and bushy.

Cannell's Forcing, Sutton's Winter White, and All the Year Round represent a section remarkable for the size of the individual flower pip and pure colours, and while some are plain leaved, others have the deep green Wallflower-like foliage. For cutting, the branching Stocks have a marked value, and the sweetness of such flowers cannot fail to enlist the sympathies of the least observant of flower lovers. Much the finest Stocks I have grown for winter cutting is Sutton's Perfection, both white and crimson. Weekly cuttings set up a lateral growth which, with a good batch to draw upon, provide light sprays for weeks in succession, and these same plants, when they have done duty in pots, may, with a little preparatory hardening, be planted in the garden borders, where, with renewed root action, they soon furnish additional flower, and this, too, before the spring-sown Stock is ready.

From June to August afford a suitable period for seed sowing, the number and extent of sowings being guided by the ultimate use and demand. It must be reasonably conceded that for an early winter display a correspondingly early start must be made. Cool frame and outdoor stations should be assigned them in order that their growth may be sturdy and progressive. At this late period it would be advantageous to sow the seeds in small pots, so that their transfer shall not hinder their necessary advance. They quickly suffer from severe root disturbance at any time. While occupying cool frames it is necessary to give close attention to ventilation, otherwise mildew quickly takes possession of them, much to their disadvantage. Their removal to an airy greenhouse is advised before cold, damp weather sets in, as a preventive of mildew troubles.

They do well in pots ranging from 3in to 7in in diameter, and in small pots the dwarf section are highly decorative in the conservatory or greenhouse whilst in flower. As winter advances there may be found a necessity for a little more warmth than an ordinary greenhouse affords; at any rate, when they are required in early bloom. When advancing into flower, and the pots filled with hungry roots, a liberal fare is called for to sustain a requisite vigour. If starved, the bottom leaves die prematurely.—W. S., Wilts.

## The Sparrow.

At no time of the year are the mischievous habits of sparrows more strikingly illustrated than at the present, when the grain crops are approaching maturity. Later on, when ripe corn is more general and plentiful, the damage is not so conspicuous, but at this stage the depredations are easily seen, because of the concentration of the winged forces on the earliest patches of corn. It will be noticed that large portions of the crops are practically threshed as a result of the attentions of the hedge sparrows, and yet these restricted areas merely furnish examples, and do not constitute the whole of the damage for which these birds are responsible. The sparrow is not without its champions, but they are not to be found among those whose crops it largely lives on and who are in a proper position to judge of the habits of the bird. Let anyone who is still in doubt as to the attitude which the farmer should adopt towards the sparrow take a walk through the cornfields as the crops are assuming the harvest colour, and they will promptly have their mind made clear on the point. The sparrow may have possibly its uses, even from the farmer's point of view; but there must be few observant agriculturists who would not endorse the opinion that its possible good qualities are far outweighed by the mischief it is responsible for.

**Lælio-Cattleya Broomfieldense.**

This bigeneric hybrid was certificated in 1894, and comes as a cross from *Cattleya aurea chrysotexa* and *Lælia pumila* Dayana. In habit it is intermediate. The sepals and petals are rose-purple, and a lip that is even brighter than they, being also frilled and wavy. The forefront part is deep crimson-purple, the throat being marked with gold and crimson. It is not at all common.

**The Week's Cultural Notes.**

The present is not a particularly busy season for the Orchid grower, as the work is largely of a routine character. Some growers apparently find it monotonous to go on day after day, watering, shading, damping and cleaning, and in proof of the old saying about idle hands, begin to pull about plants at the root that are far better left alone. But there is no need to be idle. Orchids have the peculiarity of being almost, if not quite, as interesting when in growth as when in flower, and the daily round may be made profitable by examining the progress made by the specimens, and checking anything that may be going wrong.

The *Cattleya* house will be especially interesting now in the matter of growths, and a little rearrangement will probably seem necessary to the careful grower. Plants, for instance, of *Cattleya Mossiæ*, that have been placed in the coolest and shadiest part of the house for flowering, will now be moved to a better position, for this popular species has its season's growth still to make; not like *C. Gaskelliana* and others, that flower upon the current year's pseudo-bulb. This is only one instance out of many that will come under the eye of an interested grower.

Among the *Dendrobiums* some plants will in all probability be growing in a manner not acceptable. Before, or as soon as, the growths are completed, a new one will start from the base of the one just maturing, and obviously it will be quite impossible to finish it this season. What is to be done with it? The best thing to do is to allow the primary growth time to finish properly and treat the precocious youngster as if it had no existence, placing the plants in a cool light house at once when this occurs. Probably this will have the effect of checking its growing propensities until spring and more suitable conditions arrive. In the case of *D. Wardianum*, which is one of the principal offenders in this way, the growths come away again all right, though I have no doubt that if it could be kept to more normal seasons it would be a longer lived species under cultivation.

Those singular Orchids, *Catasetums* and *Mormodes*, will also

be finishing up now, and nothing short of a thorough roasting in the sun seems to satisfy these truly deciduous species. As soon as the foliage is ripe there can be no harm in placing them in the full sun and exposing them to plenty of air. Plants that are not thoroughly ripened by some such means will never flower satisfactorily.—H. R. R.

**Freessias for the Winter.**

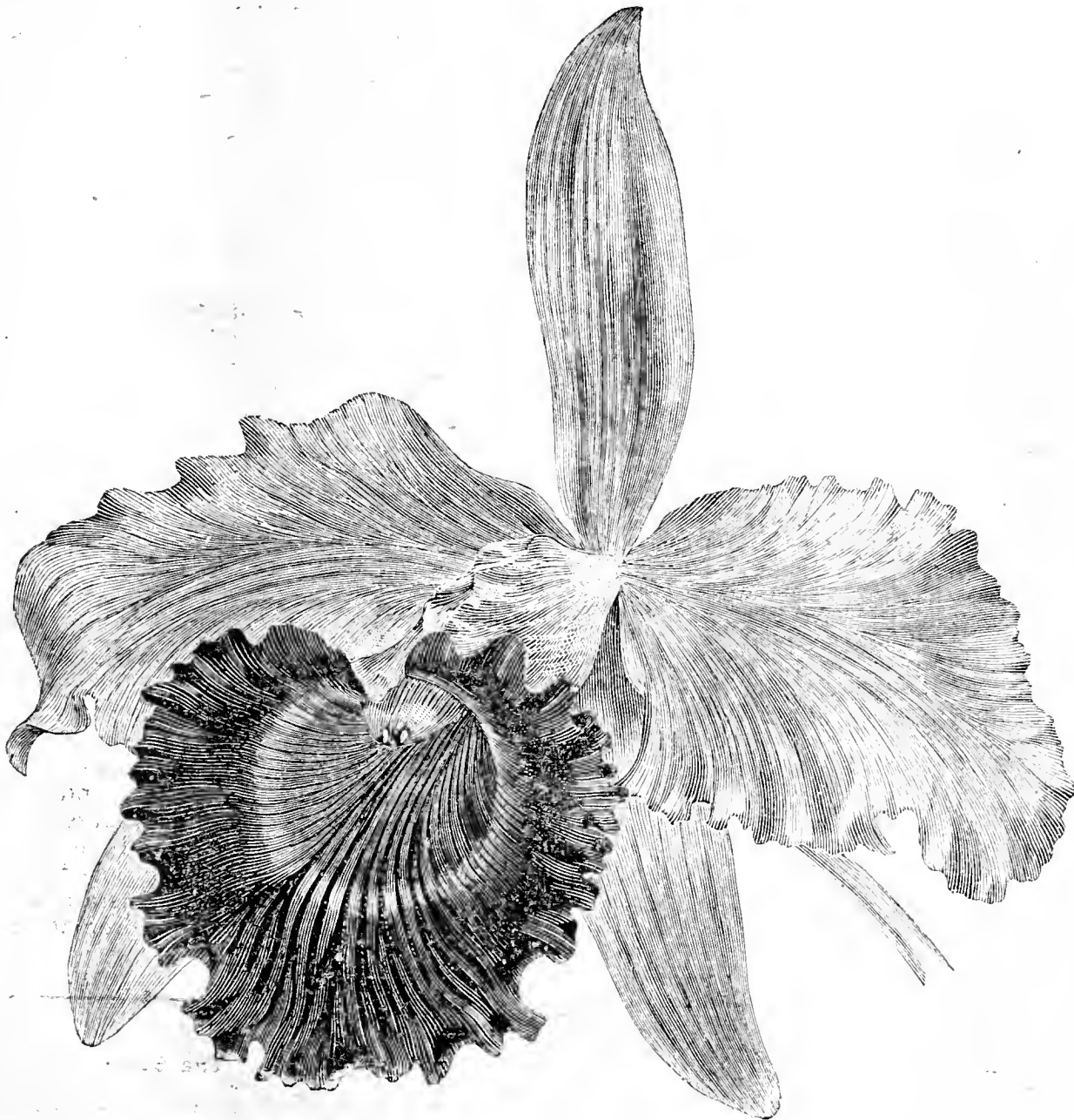
None of the many bulbous flowers now grown for winter and spring use are more appreciated than *Freessias*. They are so easily adapted to the requirements of greenhouse treatment, that quite a prolonged season may be had of decorative plants or vase flowers in a cut state. By adopting a successive practice in potting, there is no difficulty in having flowers for about four months without much cost in firing or the purchasing of stock. Non-success in dealing with imported bulbs a few years since, raised an impression that they were unremunerative and not

easy to manage. Later experience dispels these thoughts, for last winter in particular, the imported bulbs gave much the stronger plants and the finest racemes grown under exactly the same conditions as the home-saved stock.

To obtain flowers at Christmas, the potting of selected bulbs need be carried out in July, so that time is allowed for steady advancement, and the necessity of hard forcing averted. In potting, some take no care to select the bulbs by sifting the larger from the smaller, while others make this a rigid practice. Last year we saw a large batch of *Freessias*, which, in their potting, had been simply sown in their flowering size on the surface of the prepared soil, which three-parts filled the pots. They came up as a consequence as thick almost as Mustard and Cress, and what was not a little surprising, they flowered wonderfully well.

Now, while some would at once condemn this apparently "slack style" of potting, there was not an atom of doubt in their ultimate use that they were far better fitted, because more decorative, than those having the rule of thumb number of eight or twelve, according to the size of pot employed. It must be remembered, however, that there were a good proportion of large, saved, flowering bulbs, or this success would not have been allowed.

*Freessias*, though intensely appreciated by my employers in a cut state, are set a lower value on when grown a few bulbs in a pot (as a vase plant), and since the success of those just referred to are remembered, there is a feeling set up that a little more freedom of small roots will advance their utility as pot-grown plants. For cutting purposes particularly, later batches can be grown more freely and with less effort in shallow boxes. These afford, too, a means of raising a stock of flowering bulbs from the very small offsets which cluster so thickly round the old roots.

**Lælio-Cattleya Broomfieldense.**



Another point in their culture on which growers differ, is the covering up of the pots in cocoa-nut fibre or ashes, leaves, and such like, when potted. While success attend both practices, it cannot be denied that they do as well, if not infinitely better, without being so protected. I have seen them growing as well as they can possibly be expected to grow, simply placed on a cinder bed on a garden plot, where adjacent trees provided a little sun-and-wind-break. These were wonderfully sturdy, the growth being well maintained by this open-air treatment, so long as it was deemed safe to trust them out of doors. Transferred to warm greenhouses, there would be a more ready response and marked gain over plants somewhat drawn first by a covering of the pots, and the afterward sheltering influence of glass lights. To some extent, too, there would be less necessity of strict rule in potting successfully for bringing on the varied batches, one after another, by adopting this sanatorium principle. Uniformity of moisture would be the better maintained by the use of an ordinary frame, without lights, or the fixing of some boards in a suitable square, this protecting the outside pots from sun and drying winds.—W. S.

## Old-time Gardening.

(Continued from p. 14.)

The latest instalment in this series of articles on the history of British gardening, dealt at some length with Tusser's book named "Five Hundred Points of Husbandry," and I quoted lists of the names of flowers and vegetables grown in his time, and mentioned by him. In this book of his, he provides, moreover, an epitome of gardening in rhymes and measure as quaintly unique as the matter they serve to convey is sound. It is very remarkable, this book affording abundant proof that in many respects the mid-sixteenth century horticulturist had not much to learn in practical gardening. Ground was to be trenched in November, and in January Tusser exclaims:—

Thy garden plot lately, wel trenched and muckt,  
Would now be twifallowed, the mallows outpluckt.

I wonder how many go to the trouble of digging or "twifallowing" trenched grounds nowadays, yet it is an invaluable aid to gardening. Then, as a fruit grower, how safe is his advice! Concerning grafting, he tells us in the March Abstract:—

Who grafting loves, now grafting proves,  
Of every suit, graffe daintee fruit.  
Graffe good fruit all, or graffe not at all.

Among pithy remarks on fruit gathering these may be accepted as a sample:—

Out, fruit go and gather, but not in the deaw,  
With Crab and the Walnut, for fear of a shrew.

But lest there should be over-haste, he gives this warning note:—

Fruit gathered too timelie, will taste of the wood,  
Will shrink and be bitter, and sildome prove good.

therefore,

|   |                        |
|---|------------------------|
| Pluck fruit to last                               | Forget it not,         |
| When Michell is past.                             | Fruit brused will not. |
| Good fruit and good plentie doth wel in the loft. |                        |
| Then make thee an orchard, and cherish it oft.    |                        |

Vines were a fruit commonly cultivated, and these he advises to be planted in February. What is said of Strawberries emphasises the inconceivable advance made since then, when wild Strawberries alone were cultivated:—

Wife, into the garden, and set me a plot  
With Strawberry roots of the best to be got.  
Such growing abroad, among thornes in the wood,  
Well chosen and pricked, prove excellent good.  
The Barbery, Respis, and Goosebery, too,  
Looke now to be planted as other things do.  
The Goosebery, Respis, Roses, al three,  
With Strawberies vnder them, trimly agree.

Exactly the same methods of treating Strawberries are noted by later writers, and actually they were sometimes set under the shade of orchard trees. Moreover, the Strawberry was thought not to be hardy:—

If frost do continue, take this for a law,  
The Strawberies look to be covered with straw.

And not only this hardy fruit, but:—

The Gilleflower also, the skilful do know,  
Doth look to be covered in frost and in snow.  
The knot and the border, and Rosemary gay,  
Do crave the like succour for dying away.

Of pot plants the farmer cultivated at least two!

Fine Basil desireth it may be her lot  
To grow as a Gilleflower, triu in a pot.

Peas formed the most important crop of the kitchen garden, and directions occur from time to time as to what required doing.

Greene peason or hastings at Hallowtide sow,  
In harty good soile he requireth to grow.  
Gray peason or runcivals cheerey to stand,  
At Candlemas sow with a plentiful hand.

"Runcivals" were to be sticked in February and late Peas to be sown in May, while

White peason, both good for the pot and the purse,  
By sowing too timely prove often the worse.

There are many other wise sayings as to sowing, planting, weeding, &c., and, strange as it may appear to us now, the chief care of the garden devolved on the mistress of the establishment.

In March and in April, from morning till night,  
In sowing and setting good huswives delight.  
To have in a garden or other like plot,  
To trim vp their house and to furnish their pot.

"Good huswives in summer wil save their own seed," "Maids Mustard seed gather, for being too ripe," are other quotations. They also managed the Flax and the Hemp crop, and Hemp, Tusser assures these lady gardeners, should always be planted among Nettles!

Saffron, too, indispensable in every household, was under their charge. It was to be transplanted in gardens once every three years, and in the field every fourth year. The bed was "pared," or the surface cleaned, between the two "S. Maries daies," and "fortie foot" furnished Saffron enough for a lord and a knight. During winter "linnen" was bleached, laid on the densely grown foliage. The secret of Saffron culture seems to be lost, as the plant is one of the most shy plants to bloom, missing year after year. In 1901 it flowered here in Haddingtonshire, but not till November. It is just possible, however, that the old Saffron Crocus has disappeared and less valuable seedlings have usurped its place. The "huswife" was also responsible for the healing of the sick, and had to cultivate physic before she could prescribe it to her patients.

In addition to details under "Good Huswiflie Physicke," here and there throughout the book remarks are to be found on the subject.

Get water of fumetorie, liver to cool,  
Conserves of Barberie, Quinces or such,  
White Endive and Suckorie, with Spinage enough;  
All such with good potherbs should follow the plough.  
Make physicke true, of Wormwood and Rue.  
What savor is better if physicke be true  
For places infested than Wormwood and Rue?" &c.

Sloes were preserved in bed-straw, or hung up attached to their branches, to be used in dysentery. The farmer, it would appear, did not sand his garden walks, but was content with commoner materials:—

Save sawdust and brickdust, and ashes so fine,  
For allie to walk in, with neighbor of thine.

And "haws" and "brembles" (wild Roses) were sown for hedging purposes. Very good advice is given how to proceed in the furnishing of an "arbor":—

To arbor begun and quicke setted about,  
No powling or wadling til set be for out.

That is, the poles and wattles (split willows not improbably) were not to be fixed till growth had advanced sufficiently to require support.

The first book devoted solely to the cultivation of fruit appeared in 1572. It is entitled "A Book of the Arte and Maner howe to Plant and Graff all sortes of Trees, &c.," by Leonard Mascall. This person was clerk of the kitchen to Archbishop Parker, and he varied his labours on gardening by invasions into the departments of farriery, stock-keeping, and kindred subjects, and, as a fact, the work above mentioned is merely a translation from the Dutch. It details with much fulness the raising of fruit trees from "pepins," grafting and its benefits. Later, bound up with "A Perfect Platforme of a Hoppe Garden" and "The Expert Gardener," it was published as "The Countreyman's Recreation." In 1578 another translation, which proved a very popular one, was produced. This was "Dedoens Nieuwe Herball or Historie of Planten, translated by Henry Lyte, Esquayer." It forms a good sized folio, with numerous faithfully executed line engravings of the plants described.

An octavo without the engraving followed in 1586. This work has already been valued, and as early as 1580 among things advised to be carried on a voyage of discovery in that year occurs "The New Herball." It is, however, of no great utility viewed from the purely horticultural vantage; but it is rich in old English plant names. Lyte himself appears not to have possessed a garden, at least he never ventures to say he himself cultivated plants, but only remarks a plant is to be found "in the gardens of certayne Herboristes," or as in the case of Ceratonia siliqua, "they be sometimes founde in the gardens of some diligent Herboristes; but they be so small shrubbes that

they can neither bring forth flowers nor fruit." He possessed and gave utterance to very strong opinions, as of Nerium Oleander, where he says:—"It hath scarce one good propertie. It may be compared to a Pharisee, who maketh a glorious and beautifull shewe, but inwardly is of a corrupt and poysoned nature. God graunt all true Christians and Christian Realmes whereas this tree or any branche thereof beginneth to spread and flourishe to put to their helping handes to destroy it and all the branches thereof: as dissimulation, Couvetousnesse, Briberie, Sir Symonie, and Maister Ursurie." A MS. note of about a contemporary date in my copy agrees with the author that "Oleander or Rose Baye is an Curssed herbe." There is, too, a curious reference to the Dutch Boers, who at this date appear to have been causing not a little trouble in Holland.

Langham's "Garden of Health," 1579, contains interesting notes on plants; and Bullein's, or Boleyn's, "Government of Health," 1588, is a very curious book, the author having been possessed of an exuberant humour, with a method of placing it before his readers of the happiest. From him we get a name of Hemp, "St. Audrey's Laces," the root of tawdry, a word circulating before this time as in "The Shepherd's Calendar":—"Girde in your waste for more finenesse with a tawdry lace"; and a tawdry lace, it will be remembered, was desired by Mopsa when the clever, if rascally, Autolycus was disposing of his wares. It does not follow that these were made of Hemp, and Drayton seems to give the correct way of making them in the "Polyolbion":—"With white pebbles make her tawdries for her neck." Bullein's "St. Audrey's Laces" was a necklace too, just as gallow grass and neckweed were other names he uses with a grim humour for Hemp.

In 1594 "The Jewell House of Arte and Nature," by Sir Hugh Platte, was published. It is divided into three parts, of which the second, treating of soils, is of most interest to the gardener. Occasionally this part is to be got bound up separate from the others; but the work as a whole is of little value. The author possessed two country houses and a town house at Lincoln's Inn. Gerard's "Herball," the greatest work of its kind of the period, falls next to be noted; but previous to doing so a short résumé of what was passing outside gardening will serve to elucidate and explain the work in question, which is the first to treat seriously of the advance section of that exotic vegetation which fills our gardens to-day.—B.

## Gadding and Gathering.

"HERE AWA', THERE AWA'."

### Some Hardy Plants at Kew.

Though rather of a weedy and straggling habit of growth the new *Campanula sulphurea* will be welcomed in places on account of its pale yellow flowers. We have now violet, purple, blue, white, pink, yellow, and perhaps other colours amongst *Campanulas*. The species is now in flower at Kew, and would appear to be an annual.

*Rodgersia pinnata* is a Chinese species in common with others of the genus, is perhaps little known, being one of three introduced to cultivation within the last few years. At Kew it is growing beside the little dripping stream in the centre of the rock-garden, and is now in flower. The tall thyrsoid inflorescence bears beautiful rose flowers rather densely packed, and the foliage is finer than *R. podophylla*. The six leaflets are arranged around a central axis at the end of the petiole. Mr. Elwes, to whom I pointed it out, was much delighted with it.

*Genista dalmatica* is a very dwarf and dense shrub, with pretty grey-green shoots exactly like the young growths of the common Gorse, and the terminal close-set racemes are deep, golden yellow. It can be used on rockeries to advantage, or in such places as those in which one usually finds the Spanish Brooms flourishing.

Covering a tiny spot on one of the rockery pockets we find *Sedum cæruleum*, a perfect little gem, with its blue-fringed flowers. The flowers at present hide the minute stems and leaves, and remind one of *Houstonia cærulea*. Contrary to the rule among *Sedums*, the flowers in this tiny stranger have ten segments.

Stepping from the rock garden to the herbaceous ground one cannot fail to notice the very handsome *Senecio macroglossus*, with spathulate foliage nearly 2ft long, bright glaucous in colour, and of the texture of a Cauliflower leaf. As a solitaire for placing by the edge of a still water pool it is one to be commended. The tall and deep yellow inflorescences are exceedingly effective.

One would like to individualise many another fine plant or plants which could be chosen from the collection of Delphiniums, the Poppies, *Campanulas*, *Galegas*, *Lathyrus*, *Polygonums*,

*Salvias*, *Lychnises*, and the Pink family is general, while they are still with us, but the chance may be taken to write of them in a following number.

### Floral Designs.

In my peregrinations about the shops recently I have noticed a basket of rectangular shape, poised on a pedestal, and filled with yellow *Coleus*, yellow *Codiaeums* (*Crotoms*), yellow *Privet*, and yellow Spanish *Iris*es. Broad yellow ribbons in loops and bows were fixed on a top-rail at the back, and the basket was bound round with the palest green ribbon and one bow tied at the left-hand front corner. Another basket of the same shape and size (18in by 12in) contained only the Zonal *Pelargonium King of Denmark*, the plants being robust and well-flowered. A bright cerise-salmon satin ribbon, 6in or 7in broad, was boldly looped right up amongst the flowers, and certainly improved the richness and splendour of the effort immensely. Another similar basket contained cut flowers of pink Sweet Peas at the left-hand front corner, pink Carnations at the right-hand corner, and the whole of the back filled with upright racemes of Lily of the Valley, the basket being bound round with the indispensable red ribbon.

Sweet Peas of the variety Lady Grisel Hamilton, erect in tubes with Rye and Briza, standing on a white cloth, were also delightfully pretty and simple. In the shops I see that the merits of the new *Kalanchoe flammea* with brilliant scarlet cymes is already recognised.

### Southend-on-Sea.

Though I have never found Essex at all beautiful, the county at the same time possesses features and centres of interest. Southend-on-Sea, at its south-eastern "neuck," as a Scotsman might say, is its most popular watering-place, for I believe Southend lays claim to that poetical appellation. From London one journeys by the Tilbury and Southend Railway—a good service—through some of the most squalid districts and densely populated boroughs of this great metropolis, through Stepney, and on first, to West Ham, then East Ham, either of which have a population almost equal to that of all South Africa, and so out to the opener country and the market gardens. The flatness of the region traversed is proverbial, and with the numerous smoke-belching chimneys which one discovers in all directions for a long way down, the scene throughout is not strictly inviting.

London has been twitted on the supposition that it possesses only one tree—the London Plane. This is not so. London has two trees. The second tree is the Black Poplar. Go by the "tube" to Shepherd's Bush and you will see long vistas lined with absolutely perfect Poplars and Planes placed alternately in rows on either side of the great thoroughfares. The Black Poplar is a splendid tree. It is used in North London, in South London, in West London, and I found it flourishing in the districts already named in East London.

But though the southern parts of Essex are not fruitful to all appearances, one forgets of that when nearing Southend, where the land gains in character, higher and broken ground arises, and one has a general sense that there is "something doing." The ozone wafts strongly, the huts of the cockle-gatherers line the beach, and soon the newer part of this now popular resort is opened before the visitor.

Southend has the longest pier in the world, with an electric tram running to the end of it; it has beautiful esplanades, and is now continually improving them; it has overhead electric trams, and beautiful parks, gardens, shrubberies, and rural walks or drives near by. The grounds named The Shrubby are clothed densely with Oak trees, among which, on the rather steeply sloping banks, are many shaded pathways, lined here and there with flower borders and overhung with beautiful Roses. So, too, the Marine Park and the Public Recreation Grounds (with a lake), both at the east end of the town, are handsome and most enjoyable for the inhabitants and the visitors. With a powerful and business-seeking Corporation, Southend seems unlikely to be wanting in the matter of further parks or gardens. These can be secured from the numerous estates surrounding the town, and it is imperative in the best interests of this seaside place, that as many features of interest as possible should be added.—WANDERING WILLIE.

### Sweet Lavender.

About the middle half of August the Lavender sheaves will be gathered in from the fields of Surrey, and from that other Lavender land which has been much developed of late years in the neighbourhood of Hitchin, Herts. Though so much at home amongst us, the real place of its origin is Southern Europe. The harvest of flowers—Roses, Violets, Jasmine—gives to the Valley of Var, in Southern France, great commercial importance; but England, however, is making a bid for some of this wealth. In her famous village industry at Wallington, Miss Sprules grows Provence Roses as well as Lavender.





### Roses at Presdales, Herts.

In answer to our request for information respecting the Rose garden and varieties at Presdales, near Ware, Mr. G. Fulford writes as follows:—"The beds had to be made here, as we have a very shallow soil, resting on a bed of gravel. The land suffers greatly in summer, even although we water a great deal. The Rose beds consist of our best loam which is light, but a mixture of clay and manure was added when planting. We have to manure heavily every year, and feed the Roses well with guano and liquid manure. The pergola (see illustration) is made of rough brick piers, covered with undressed Oak and Fir branches. Between the beds, and in the centre, poles are let into the ground, these being supported by iron stakes, and chains (to which the Roses are trained) are stretched from post to post. The majority are now covered, having only been planted five years. At the end of the Rose garden a hedge of Sweet Briars are growing on wires.

"The climbing Roses, which extend over the pergola, consist of the following 36 varieties: Leopoldine d'Orleans, Aglaia, Brightness of Cheshunt, Arvensis, Madame Plantier, Charles Lawson, W. A. Richardson, Ulrich Brunner, Alister Stella Gray, Paul's Single White, The Garland, Paul's Carmine Pillar, gracilis, Coupe d'Hébé, Princess Louise, Gloire de Dijon, Madame A. Carrière, Fortuniana, Bennett's Seedling, Madame Berard, Bouquet d'Or, Longworth Rambler, Turner's Crimson Rambler, Flora, Magna Charta, Morletta, Victor Verdier, Monsieur Desir, Reine Marie Henriette, Blairi No. 2, Kaiserin Friedrich, Yellow Banksian, Reine Olga de Wurtemberg, Dundee Rambler, Gaston Chandon, Thalia.

"In beds there are the following thirty-six varieties of dwarf Roses:—Marquise de Salisbury, Victor Hugo, Paul's Cheshunt Scarlet, Bacchus, Duke of Edinburgh, Général Jacqueminot, Captain Christy, Madame A. Chateney, Docteur Andry, Baroness Rothschild, Camoens, Paul's Early Blush, Viscountess Folkestone, La France, Clio, Augustine Guinnoiseau, Mrs. W. J. Grant, Ulrich Brunner, Lady Mary Fitzwilliam, Her Majesty, Hon. Edith Gifford, Madame Lambard, Sunset, Madame Falcot, Madame C. Guinnoiseau, Catherine Mermet, Marie Van Houtte, Captain Hayward, Paul Neyron, Clara Watson, Mrs. Paul, Madame Victor Verdier, Duke of Edinburgh, General Washington, Muriel Grahame, Lady Battersea. The two last-named varieties do not appear to be very strong growers, but may improve as they get established."

## Strawberries.

With a good stock of early and strongly rooted runners there should be but little difficulty in establishing a bed for the production of a profitable crop next season. In few cases will runners be sufficiently freely rooted if reliance is placed on those to be found in the soil between, or outside, the rows, even where they may have been specially encouraged to root well. Such plants will, however, come in well for late plantations. For immediate planting the best are those which have been assisted to root into pots or turves. The crowns are strong, the leaves healthy, and the root fibres numerous and ready to rapidly multiply.

### Propagation and Planting Early Runners.

The ground for this early planting may be a site not necessarily just recently prepared, but one that was liberally treated in spring in the matter of deep culture and free manuring. Since that time it may have produced a crop of early Potatoes, which have now been lifted. The preparation necessary on such ground mainly consists in cleaning and levelling the surface, it not being essential to loosen the soil deeply at this stage; Strawberries, as a rule, preferring the ground to be of a firm character, though of a good heart.

The plants should be well moistened several hours before planting, and, as a further means of ensuring them plenty of moisture to assist their becoming quickly established in their new quarters, plant in a fairly deep drill, or form a basin round each to hold water. August being a dry month, artificial waterings will be a great help during the hottest periods. The distance between the rows may be from 2ft to 30in, and 15in to 18in from plant to plant.

Royal Sovereign cannot be excelled. It is good, early, and prolific. Noble, President, Monarch, and Leader are also first

class varieties for main crops, with Latest of All and Waterloo for late supplies. The new Laxton's Fillbasket, and especially the variety named "The Laxton," are very meritorious, and we commend them. It is well to try new sorts occasionally.

Although runners left to themselves form roots and establish plenty of fibres in the soil, they cannot always do this, and a little attention is required in clearing away the obstructive growth of crowded runners and weeds. Fork up the soil about them, so that a loose and fertile medium is secured, into which the roots can readily push. Peg or otherwise fasten them in position at the most desirable spots, and cut off the runners extending beyond the plantlets. These will come in conveniently for the later plantations.—E. D. S.

## The Shrubbery in August.

A combination of trees and shrubs represents the majority of shrubberies. The trees afford the shelter and shade essential alike to urban, suburban, and rural dwellings, and beneath and in front of the trees, forming the undergrowth and fencing, are disposed a number of shrubs. After the spring and early summer this assemblage of trees and shrubs is more or less monotonous, varying, of course, with the variety of subjects. Coloured foliage plays an important part in the attractiveness or otherwise of the shrubbery after the heyday of flowering and perfume is over, being aided by the profusion of berries and fruits that in many cases are quite as beautiful as the flowers that precede them. Flowers, however, are not, or need not at this season be absent, and that they brighten or are themselves heightened in contrast by the prevailing green is matter of importance where herbaceous plants do not besprinkle, as they seldom do advantageously, the trees and shrubs.

But my object is not to review the many subjects that enter into the composition of shrubberies, rather to note a few that are not too often seen, and without which the shrubbery is certainly unattractive in August. I should like to mention that the very beautiful shrub, *Choisya ternata*, in examples 4ft to 6ft high and half as much again in diameter, produced its peduncles of white, sweet-scented flowers in great profusion at the end of June, and is one of those charming plants with bright green ternate leaves far too seldom seen. That as a prelude, with the reminder that it is only hardy in the southern and milder districts of England, for it is a native of Mexico.

*Olearia Haasti*, an evergreen with small leaves, white beneath and densely disposed, has been smothered with its numerous heads of white, sweetly scented flowers, in examples of scarcely a yard up to 6ft in height and as much through. There are some fine specimens in the burial ground attached to the Baptist Church, Dagnal Street, St. Albans, and smaller ones in the cemetery. It is a native of New Zealand.

Rush or Spanish Broom, *Spartium junceum*, has no equal for bright golden sheen, the flowers yellow, fragrant, and disposed in terminal racemes. It is very ornamental when in flower, and though becoming somewhat straggling with age, is well adapted for shrubberies. It may be kept quite low by cutting down and spurring the growths close in every spring, thus securing bushes of 3ft or 4ft height, with splendid growth and extra fine flowers. Left to itself it becomes somewhat bare at bottom and attains a height of 6ft to 10ft. It hails from the Mediterranean regions and Canary Isles.

*Kerria japonica* was bedecked with its bright orange yellow flowers, the single-flowered form being much the most elegant plant, having a graceful habit, and specimens may be had scarcely a yard high and as much or more through by cutting in close in spring. Indeed, it may be cut to any extent, and flowers all the better in consequence, being nearly always in flower.

The *Spiræas* or shrubby Meadowsweets were delightful. *S. bella*, with its terminal cymes of flowers of a beautiful red colour, lit up the greenery of adjacent evergreens in a telling manner. *S. Douglasi* charmed with its bright pink bloom borne in a dense terminal thyrsoid panicle 6in to 9in in length. Not least in attractiveness was the naturalised in Britain Willow-leaved *S. salicifolia*, with its rosy or pink blooms disposed in terminal, racemose, dense, sub-cylindric cymes. The Siberian or Sorbus-leaved, *S. sorbifolia*, gave its flowers in thyrs-like panicles, its white telling against dark green.

I pass now to the changeables. The finest examples I have yet seen in pots of *Hydrangea hortensis* are in the Stationmaster's garden in Ridgmount Road, opposite St. Albans Midland Railway Station. The plants are about a yard high and more through, and the heads of bloom are not only abundant, but remarkably large and fine; not stiff, formal things on the stake and tie system, but compact, natural trained specimens. I was also delighted to see *H. paniculata grandiflora* as standards, the stems about 3ft high, in a villa garden in Clarence Road, St. Albans, the white flowers disposed in a large, terminal, leafy panicle 9in to 12in long, consisting of openly arranged, small, star-shaped

blooms, intermixed throughout with sterile ones more than an inch across, having a fine effect. These are planted out, and stand the weather unharmed. The plants of *H. hortensis* require, of course, protection in winter, and why not give it in the case of planted-out specimens, so as to have some colour in the late summer months in the shrubbery?

The Smoke Plant or Burning Bush, *Rhus Cotinus*, is like a bush on fire by the bright colouring of the hairs produced by the lengthening of the pedicels after flowering. What makes the branches of this shrub die off suddenly without apparent reason? Fungus. What and when do the fruits appear? I confess to being unsuccessful in tracing cause.

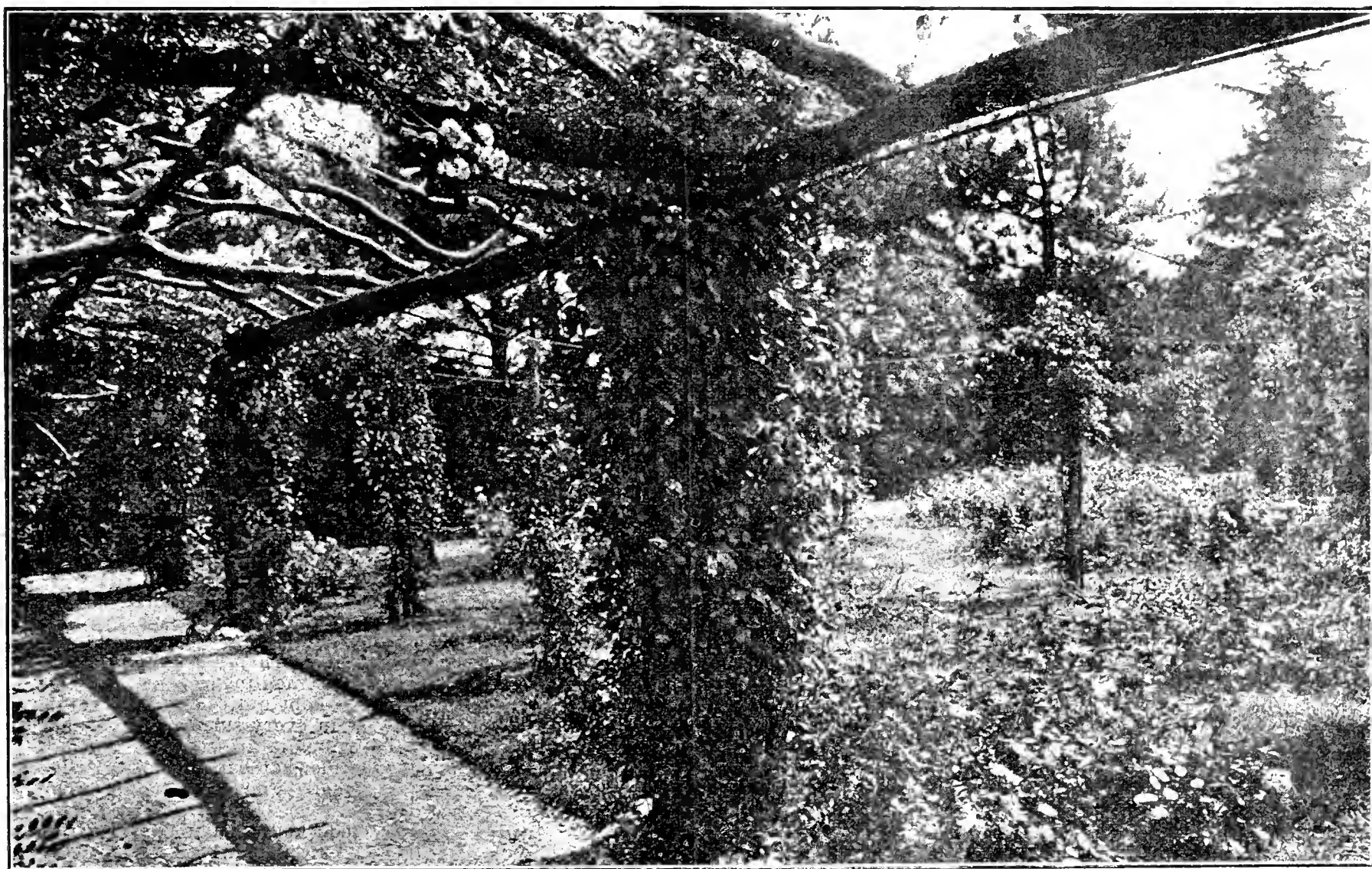
Syrian Mallow, *Hibiscus syriacus*, or *Althæa frutex* vars., so seldom seen, though highly ornamental, have and still will charm alike by their varied colouration, large single or double flowers.

The Goat-scented St. John's Wort has bloomed profusely, its yellow flowers being very conspicuous. *H. Hypericum hircinum* does well in shade. Aaron's Beard or Rose of Sharon, *H. caly-*

white berries. It flowers much finer in the open than in shade, and the plants are all the better berried for that and a relatively dry gravelly soil.

*Magnolia grandiflora* is blooming grandly against walls, its white flowers contrasting finely with the noble evergreen foliage, and the air is laden with fragrance. Sweeter still is the essence diffused by the white Jasmine, and to heighten the whole is the glowing colour of *Eseallonia macrantha*, the shining deep green foliage being very beautiful, and setting off the racemes of crimson-red flowers to great advantage.

As something out of the common, I may mention a Spruce tree in nature surmounted by Traveller's Joy, *Clematis Vitalba*, the Spruce being over 45ft in height and the Clematis forming a pyramid of white blossom about 12yds in height. In a villa garden a similar thing occurs, but whether by accident or design I do not know. The Old Man's Beard has surmounted the Spruce, which is about 20ft in height, and in August was "a sight" of white bloom, which exhaled a sweet almond scent. In congruity



Rose Garden at Presdales. (See page 124.)

cinum, is still better in dry, shaded places, and it flowers splendidly, being nearly, if not quite, evergreen. In the open it flowers earlier than in shade, and the flowers are much larger. *H. elatum* has also been very fine.

*Leycesteria formosa* forms a moderately large spreading shrub in gravelly or well-drained soil, is very handsome, its white flowers tinged with purple being disposed in leafy drooping racemes, and deserves a much more extended cultivation than it now enjoys.

Still rarer are the Adam's Needle, Bear Grass, or Spanish Bayonet. What more beautiful than the Mound Lily, *Yucca gloriosa*? In July or August the splendid panicles of flowers tinged with red outside are charming, thrown up above the ample leaves to a height of 4ft to 6ft. The form known as *Y. recurva*, syn. *Y. gloriosa recurvifolia*, is a charming lawn plant, and is now throwing up its panicles for blooming, the plants having been transplanted in the spring.

The Snowberry is still blooming, though the white berries are as large as birds' eggs, the cluster-flowered *Symphoricarpus racemosus* being, perhaps, the best variety, and blooming from July to September along the same growth with the berries is very interesting, the rose-coloured flowers contrasting well with the

I have not come across many, if anything more pleasing to the eye and sense. On the other hand, both were offended by a Dundee Rambler Rose planted at the foot of a large Apple tree, and making an effort to reach daylight through the head, eanked and infested by American blight. Evidence was afforded of the Rose not being a parasite of support, as in the case of the White Vine on the evergreen, and it in consequence was a poor thing struggling against adverse circumstances for existence. Thus was deduced one more lesson from the contrast of fitness and unfitness of things.—A. G.

#### A Giant Tree.

In California a specimen of the *Sequoia Wellingtonia* has been discovered, far exceeding the largest yet known. Its breadth is 51ft and its circumference 154ft 8in, whereas those hitherto accounted the greatest measured from 80ft to 95ft in length and about 30ft in diameter. It is, fortunately, also, the property of the Government, and may therefore escape the millionaire trust.





### The Judas Tree.

I take in your excellent Journal, and my gardener, whom I give it to to bind up for reference, is anxious that in connection with the account of a few Judas Trees in England quoted, it should be named that in this garden (The Knoll) there is a good sized one, planted, I suppose, twelve years, which bears its pink blossoms pretty in spring, and also seed pods later. There is also still, I believe, a fine old Judas Tree in a garden at East Clevedon.—J. L. WOODWARD, Clevedon.

### Gardeners' Education.

The subject is so highly interesting that it is no surprise to me why a "champion of learning" has not yet arisen to refute the arguments put forth. The champions, like "Brer Rabbit," "lay low and say nuffin," knowing full well that the authors of all this educational philosophy are—can be no other—disappointed men; have lost the "grit" they perhaps never possessed, and have nothing now for the profession but sophistry. Grit makes the good gardener. Influence may get him a situation of high standing; but influence cannot keep it for him. Better the man, better the profession.—R. S.

In to-day's Journal Mr. G. Ash expresses surprise that no "Saul among the people" has arisen to demolish the metaphysical philosophy recently advanced by his confrère "D. W. G." It yet remains to be demonstrated that "D. W. G." dealt any formidable blow to the question wherewith he headed his dissertation. The greater number of gardeners are too shrewd and well educated to give more than mere passing notice to the smart epistle contributed by "D. W. G." They must see that his premises are unsound, and laid down in the form of a very bad type of syllogistical reasoning. This, therefore, friend Ash, is doubtless the chief reason your rather caustic tit-bit did not call for serious refutation. Another, but a much less one, is the fact that "D. W. G.'s" contribution was in reality misnomered. It ought to have been headed either "Gardeners' Failures" or "Gardeners' Grievances." At any rate, the text had little in common with the content, which, by the way, was little else than a tedious contumely on the craft from which he still, it appears, derives his living. Solomon, the good and wise, laid down innumerable maxims applicable to every little crook in the path of youth; but youth prefers its own way. The strange thing is that most people wish to profit by their own experience, and seldom or never care to do so by that of another. "D. W. G." might have known this ere he sat down to concoct the high coloured draught he prepared, doubtless in good faith, for the guidance of youth through the foaming breakers in the sea of fortune. Had he reflected but for a little he assuredly would have discovered that his potential advice would have scarce any influence in bending the current of the stream. The age is progressive; everyone feels the need of self-improvement, perhaps few more than the young diligent gardener and student of nature. Not, however, let it be kept in mind, because the exigencies of his duties call for it, but because he knows that among his fellows he would otherwise become a nonentity, and, besides all this, it makes life immeasurably more pleasant and easier to live.

That education alone is sufficient to achieve success, not only in gardening, but any other trade or profession, is a question few men of intelligence would ever imagine. Does a medical doctor, lawyer, or clergyman require for his profession a tenth of the matter that one or all them require to digest ere they receive the grand prix? It is a well-known fact that they do not; but the process of grinding and cultivating the limbs of the mind, so to speak, is absolutely necessary to form the perfect and capable man. Even these, when all that education is capable of doing for them, often find, like "D. W. G.," that something else is needed. They may then require practice, and this cannot be always got by even the payment of money, but it can be got in a far simpler way—we say simpler with reference to the amount of tact and shrewdness one can bring in evidence—by soliciting the all-powerful and potent services of the goddess Influence. She must be negotiated if one hopes to make any progress on the ladder of fortune. This is a fact which ought to be as clearly set before every individual in life's journey as the journey itself.

Again, we apprehend that "D. W. G." and Co. do not quite

understand what constitutes education or an educated man. Our inference is entirely founded on the statements he has made re the matter with respect to gardeners. If he fancies that a course of college education is requisite for the purpose, he is labouring under a delusion of the grossest nature. The great gospel of education, in principle, is a means to reduce the Beast to a minimum, and where it falls short in partly accomplishing this function it is more a curse than a blessing to possess. It raises the species from their grovelling posture on all fours to the God-like attitude of the perfect man. In fact, it makes a gentleman of the brute, and a wise man of the fool. There have been men in the profession, and there is no reason to think there are not such still, who could teach some of the college professors on philosophy, mathematics, Greek, Latin, and Hebrew, and as regarding the mysteries of physical sciences none could have better opportunities for observation than students whom we may designate "Nature's own students." The prospects of the educated gardener are good. We know some who have graduated to the factor's desk, and several who, on account of their general knowledge of things, were entrusted with the general management of estates. We pray that all who are blind shall obtain light, and those who are ignorant shall understand—the remedy is education.—C. H. S.

### Gardeners' Bothies.

"C. H. S." has got 'em again; he seems to suffer greatly from the "bothy complaint." As the malady is quite fresh to me I cannot hope to advise him on the subject; but I distinctly remember him mentioning once that he had under his supervision an upright tubular boiler. Now, if he will only possess himself of a moderately sized garden, with the usual accessories, viz., range of glass pits, kitchen and flower plots, lawns and fruit plantation, and if this garden can be had about a mile from the nearest dwelling house suitable for lodgers, he will, I fancy, soon grow strong and healthy again. Please don't mention pitch and toss to "fourteen-shilling-a-week men," as I have heard journey-men gardeners termed, for it is wicked to gamble.—H. R., Kent.

### Fruit Supply.

The correspondence regarding the important question of British fruit supply cannot fail to have been interesting to anyone who has this matter at heart. What I am inclined to ask is, Whether the correspondence will lead to anything? The whole matter has been discussed before, and while here and there one sees men who are on the right track, they are like bright stars in a dull firmament, and improvements generally are slow in coming. According to the views of Mr. Raschen and "H. D.," capital is the mighty power that alone can bring about a better state of affairs. It is a reasonable idea, and but for the antiquated British principle of just locking up the laud by primogenitive and other laws there might be a chance for a few millionaires from "the other side" to come over and establish a fruit industry on much the same lines as it is conducted in America. I question whether British capital will do much, and in the meantime our millions are being calmly placed in the pocket of the gentlemen over the water.—WILL S.

### Metallic Pea Trainers.

The scarcity of the necessary wood Pea stakes has for a season or two compelled me to turn my attention towards the metal supports. I was taken by their appearance and neatness, and at once mentally conferred my best praises upon the man who invented such a good substitute for the old unsightly and sometimes incorrigible thing. A little experience of them, however, made me modify my first good opinion, and I am now wondering if any others have discovered any reason to utter a similar grumble as is my fate to do in this respect. My chief fault is the indifferent way in which the Pea and the wires seem to embrace each other. They appear to lack the needed sympathy which results always in perfect satisfaction. The tender tendrils of the Pea clutch to the metal very much after the fashion that the wealthy man grasps the hand of his less fortunate poor relative. The consequence is that many of the shoots fall head foremost to the ground. I have been asking myself why this should be so, and the only feasible explanation forthcoming up to this moment is the action of the atmosphere upon the metal. Iron being a great absorber of heat and cold, it always is sensibly hotter or colder than the surrounding air. In very hot weather the wires get too hot to be comfortable for the succulent tendrils, and should they be attached the heat is powerful enough to burn them. I noticed something very like this during the great protracted heat of last year. The cold this season possibly acts in deterring the tendrils to catch on as we would like to see them. In any case, I should like to hear what is other gardeners' experience in this matter.—D. C.



#### The Japanese Maples' Short Growing Period.

To properly handle and care for plants one must thoroughly know their peculiarities. The Japanese Maple has a character worth noting, in its rapid growth in early spring and its sudden cessation. It takes but three or four days of real warm spring weather to make growths of 5in or 6in length, and when a foot of growth is made, the average plant will stop and busy itself with maturing. This is an important fact for those persons that do odd summer pruning; unless the work is early done it is useless.

#### Cactus Dahlia Aunt Chloe

Is one of the novelties to be distributed in the coming weeks, and it is one of striking qualities. The colour is particularly dark and rich—almost black. The bloom is of lovely shape, its florets being long and pointed. In dark kinds it is not easy to beat Uncle Tom, yet the new one may be considered the more refined. It is not a little remarkable that Mr. Stredwick seems to be the only raiser to effect improvements in the deep-coloured shades. First we had Harry Stredwick, then Night, and more recently the two named above. This new variety is sure to become popular. The growth of all these dark sorts has been so good that, although I have not seen the kind growing, I have reason to believe Aunt Chloe to be equally satisfactory.—W.

#### Hypericum coris.

This, though old, is scarcely known. It is a very neat and compact grower, with glaucous, linear, Heath-like foliage, arranged in whorls around the slender, erect growth, which is terminated by loose clusters of five-petaled flowers, pure golden yellow and quite large for so small a plant, about three-fourths of an inch across and freely produced from June to September. The stems are woody and attain a height of from 6in to 9in with us, rarely ever that. The tips are occasionally winter killed, but as the plants break freely from below, the damage, if any, is soon repaired. A spring shearing is beneficial; the plants start more vigorously when so treated. They are evergreen and succeed in almost any soil with good drainage. It is the daintiest of all the Hypericums.

#### Window Gardening.

There is window gardening and window gardening. There is the window gardening of wealth. Then there are the windows of suburban residents, made gay with blooms matching the trim bed on the little lawn. All this is suggestive of comfort, if not of riches, and of leisured taste, if not of fashion. But about the window gardening in the densely crowded East End there is something of the pathos of the widow's contribution to the treasury—the window is probably that of a room in which a family live, and the one plant is all in the way of floral indulgence that they have. There is something of desperation in such a heroic attempt to keep in touch with Nature, and to feed the eye and the heart with the companionship of one forlorn plant.

#### A Basket of Achimenes.

Certain plants, of which Fuchsias and Zonal Pelargoniums may be taken as examples, are produced in perfection without more than the most ordinary attention; and Achimenes are generally successful with due watchfulness. To produce either huge pans of specimen Achimenes, however, is recognised as deserving special credit, and at the late Beckenham (Kent) show so handsome were some of the Achimenes there that some of the committee thought a Silver Medal award would only have been a due reward to the contributor of them. We figure a hanging basket of these pretty Gesneraceous plants this week, which will help to show how adaptable are Achimenes for such use, and the basket represented is, moreover, a good one, affording a high standard to aim for. The roots may be potted in January or earlier, and grow on in moist, warm pits. (See page 135.)

#### Elderberries for Pies.

It is not very generally known (says "Mechanics' Monthly") that the common black Elderberry fruit makes into good pies. There is often a tinge of bitterness in the eating which alone prevents a similarity to Huckleberries.

#### Thunbergia Harrisi.

Thunbergia Harrisi is by no means a new species, having been introduced nearly fifty years ago; but it is not generally cultivated. The blooms are large and showy, being purplish blue with a pale yellow suffusion in the throat. They are freely produced in racemes, which should be sufficient to warrant at least one plant of this species having a place in every stove.

#### Centaurea orientalis.

Centaurea orientalis is an ornamental, branching plant with twice divided, archingly bent foliage, silvery grey in its younger state. The stems attain a height of 2ft to 2½ft, and the numerous globose flower heads are borne on long, stiff stems, from June to September. Various colours are represented, ranging from bright bronzy crimson, deeper or lighter yellow and sulphur to almost white. It is a desirable cut flower, and easily grown in border or field.

#### Cactus Dahlia Clara G. Stredwick.

This appeared to me one of the best new varieties of last year. It is composed of an unusual number of long, very narrow, pointed florets, and is full to the centre. The colour is not unlike that of the well-known Magnificent—a distinct shade of buff-yellow—bright and taking. But in formation the new one is a great advance, and I shall not be far wrong in predicting that this will be a standard kind both for exhibition and for garden decoration. The life of a Cactus Dahlia in these days of improvement is a short one; yet a distinct advance as this is will in time find its way into every collection.—W. K.

#### Cactus Dahlia Mrs. H. J. Jones.

We find that Dahlias which have flowers of two colours somewhat disappointing; they are not constant. Take Arachne and Innovation. Their crimson and white petals form blooms of especially rich and novel combinations; but on a plant scarcely two flowers are alike—one has more white another more red than their neighbours. Yet, their novelty makes them attractive, and last year several new kinds were noted. The one that pleased me most was the above. The florets may be described scarlet with creamy-white edge; these are plentiful, and are long and narrow, thus forming a large bloom of desirable shape. By the raiser it is said to be constant, and it is therefore a valuable acquisition.—H. S.

#### Pines.

POTTING SUCKERS FROM EARLY FRUITED PLANTS.—Early sorts started at the beginning of the year for fruiting now will have ripened their fruits, and the late varieties will be so advanced in ripening the fruit as to admit of their being removed to a vinery or other house rather cool and dry, which will prolong the season and admit of the successional plants being afforded more room and light to induce a sturdy growth. The suckers from the early forced plants should be taken off without delay, putting them in fibrous loam, rammed firmly into the pots and around the base of the suckers, watering at once if the soil be dry, having in readiness a bed of fermenting materials at a temperature of 90deg at the base of the pots to plunge them in. They root most satisfactorily in a close moist pit, shading until that is effected. In plunging bring the material over the surface of the pots so as to prevent the soil becoming dry near the top, the soil then having sufficient moisture until the suckers have rooted, especially if properly shaded from bright sun and ventilated moderately at 85deg. Do not subject the suckers to overstrong bottom heat. Beds that had a supply of fresh material in the spring will not require any now. They may, however, with advantage be turned to a depth of 20in to 24in; but those that had not a renewal of the material in spring should have an addition of about a foot of new tan mixed with the old to a depth of 18in, avoiding if possible the making of new beds, but if it be necessary 24in depth of new tan will afford all the heat required for the suckers.—PRACTICE.



## An Evening with the Microscope.\*

(Continued from page 83.)

We now come to the sub-stage illuminators, of which the mirror is about the most important and indispensable; and beyond saying that one side is flat for use when there is abundance of daylight, the other side concave for artificial light. The achromatic condenser, which is a combination of lenses, is used in the sub-stage in connection with the mirror and bulls-eye condenser for more fully illuminating the structure of the object. This condenser is fitted with a diaphragm or perforated plate, which revolves for the purpose of increasing or diminishing the light as desired. For dark-field illumination the Wenham Parabola produces some most beautiful effects. The light is reflected from the mirror through the cone shaped parabola at an oblique angle, and is reflected on to the object on the stage. To prevent the light passing direct to the object, there is a stop with a wire and screw thread to regulate it, which cuts off the direct rays and causes the light to be reflected. The object is thus illuminated on a beautiful dark ground.

For oblique illumination, some most beautiful effects are produced by the use of Amici's prism, which fits in the sub-stage, and when using this prism the object should be rotated by the stage fitting. Nashet's prism is also a useful fitting for similar effects, and this can be rotated without moving the stage-fitting. The illuminations of transparent subjects thus obtained on a dark ground are most delightful, particularly in Foraminifera and Polycistina, as the shells appear most beautifully transparent; but there are many others equally delightful when viewed through these prisms.

We will now turn our attention to polarised light illumination, which produces most wonderful effects, and frequently assists in accurate determination of structure, when no other method is of any avail. It is produced by the application of Nicol's prisms of Iceland spar and selenites. The analyser should be fixed above the objective, whilst the polarizer is fixed in the sub-stage, and both should be so that they can be easily rotated; the effect produced by these fittings is simply marvellous. We all know Epsom salts, white as they are, but to see them under polarized light is simply astonishing to the uninitiated microscopist, and by the use of these darkers (selenite plates) thirteen distinct colours can be produced.

There are various methods of holding subjects on the stage during examination. The mineral holder, as its name implies, is for small pieces of minerals; the three-pronged forceps for holding irregular shaped objects, and the stage forceps for holding small objects. These last two fit into a small socket on the stage. The brass forceps are principally used for collecting Algae, &c., both in salt and pond water, as they do not rust. The opaque disk revolver, and forceps with disks are used for examining minute objects, which should be gummed to the disk and rotated under the objective by means of the fine chain, so that all sides of the subject can be examined very easily. The compressors of three different kinds are for holding insects and other objects in a fixed position while being examined; the three live boxes are for a similar purpose, only the insect can be allowed to walk about if desired. The set of three dipping tubes are for catching small insects or animalcules in ponds, &c. The glass trough is intended for holding large insects or other objects in water while being examined. The stage micrometer in brass is to assist in measuring objects. The Maltwood finder is divided by horizontal and vertical lines into 2,500 squares, and used for very minute objects. The frog-plate, with bag attached, is used for examining the circulation of blood in a frog's foot. The animal is put in the bag and securely fastened to one end of the plate, while some pieces of silk are fastened to each claw of one foot, the latter being stretched out over the circle of glass in the plate, and then secured to the pins underneath, to hold it in position. It is then secured to the stage of the instrument, and by means of the light reflected from the mirror, the circulation of the blood is seen with beautiful effect. The pair of glass slips with ledge are for examining drops of blood and other fluids, &c.

To have the full enjoyment of the microscope it is very desirable to have a table that will revolve, so that you are able to invite a friend to share your enjoyment without the wearisome work of getting on and off your seat to make room for him to look down upon the instrument. The revolving part of this table, with race for bicycle balls to run in, and thumb screws, are my own invention. It can be used to revolve, or as a fixed top table, around which six people can comfortably seat themselves, and view the various subjects as long as desirable, without the annoyance of moving. I should say that many of these fittings are modern inventions which I have purchased since I came into possession of the instrument.

(To be concluded.)

\* Paper read by Mr. J. Ollerhead at a meeting of the Wimbledon and District Gardeners' Mutual Improvement Society, February 17th, 1902. The subject being again brought forward on March 17th, after a discussion on Roses in pots.

## NOTES

## NOTICES

### New Park for London.

The Parks and Open Spaces Committee of the County Council have an opportunity of acquiring, for the sum of £25,000, the house and grounds known as Avery Hill, Eltham. The land has an area of eighty-four acres, and contains a mansion with a picture gallery and a large park.

### Testimonial to the Rev. H. H. D'Ombra.

All the friends and admirers of our Nestor of Rosarians will rejoice to hear that the D'Ombra Purse Fund, which was inaugurated by the Dean of Rochester last spring, is now completed, and amounts to the substantial sum of £370. Those who know of the sacrifices made by the presentee in the cause of the Rose, and of the anxieties which have weighed upon him latterly will be pleased to know of the success of the appeal made by the Dean.

### Killed in an Orchard.

A schoolboy at Longdon, a rural district of Worcestershire, came by his death in an unusual manner. Taking one of the farm horses, he rode into an orchard and passed under an Apple tree to pick some of the fruit. While he was in the act of reaching for the Apples the horse must have moved on, with the result that the boy's jacket collar was caught by a broken bough. He thus became suspended in the air, and, being unable to extricate himself or make his cries heard, he remained there until he died. His mother found him hanging dead.

### Rainfall at Temple House Gardens.

The register of rainfall for the month of July was 0.92in, the highest maximum temperature was 83deg on the 14th and the lowest minimum was 38deg on the 11th. Rain fell on eleven days; on the 26th and 27th there was a rough S.W. gale which stripped branches of green leaves from the trees, completely covering the pleasure grounds and gardens with rubbish. The rainfall for July, 1901, was 2.38in, the highest maximum temperature was 88deg on the 18th and 19th, and the lowest minimum 47deg on the 7th of the month.—G. GROVES.

### English Plums Scarce.

The gale which swept the country last week played havoc with some of the fruit crops. Plums and Apples appear to have been principally affected. The trees in many cases were literally stripped of fruit. At Covent Garden it is stated that the Plum crop this year is in a very bad state, consequently prices for English Plums are somewhat high; but ample supplies are forthcoming from California. A large consignment of Californian Plums has been delivered in England and are selling at 8d. per lb. Owing to cold storage the fruit when delivered here is as fresh as when picked from the trees over 7,000 miles away.

### West Indian Fruit.

A direct service of fruit steamers between the West Indies and Manchester, belonging to Messrs. Elder and Fyffes, Limited, has been inaugurated, so far as concerns Manchester. The Chickahoming, the first steamer of the service, reached the Ship Canal docks on Sunday night, bringing 30,000 bunches of Bananas from Jamaica. Mr. A. Rodger Ackerley, a director of the firm, who presided, responded to the toast. He said the opening of the new service had been successful, for they had never had a cargo of fruit landed in England in such perfect condition since they began its importation to Bristol eighteen months ago. Their chief difficulty at present was that Manchester men did not buy many Bananas. Manchester, in fact, seemed to have a prejudice against the Banana which was not shared by other towns. They hoped, however, soon to have sufficient trade to demand a weekly instead of a fortnightly service. Mr. J. K. Bythell, chairman of the Ship Canal Company, said that during the morning 13,000 bunches of the fruit had been despatched from the docks, and by the evening all the cargo would be away. Fifteen waggonloads had been sent to Scotland. He hoped that the next cargo might be carried off by Manchester traders.

**Appointment.**

Mr. John Lowe, formerly general foreman in the gardens of the Right Hon. Earl De Grey, Coombe Court, Kingston-on-Thames, as head gardener to Sir William Vincent, Bart., D'Abernon Chase, Leatherhead, Surrey. Mr. G. F. Welham, for the last eleven years at Rendlesham Gardens, has been appointed gardener to G. H. Garrett, Esq., Alde House, Aldeburgh-on-Sea.

**Botanical Garden for Bradford.**

At a meeting of the Parks and Cemeteries Committee of the Bradford Corporation on August 1, Alderman H. S. Wright presiding, further consideration was given to the question of establishing a botanical garden in one of the parks, and it was decided that such a garden should be made in Lister Park and planted with labelled specimens. The work will be proceeded with at once.

**Sussex Weather.**

The total rainfall at Abbots Leigh, Hayward's Heath, for the past month was 1.69in, being 1.02in below the average. The heaviest fall was 0.28in on the 9th. Rain fell on twelve days. The maximum temperature was 85deg on the 7th, the minimum 42deg on the 3rd, 12th, and 18th. Mean maximum, 72.23deg, mean minimum, 50.18deg, mean temperature 61.20deg, which is 1.80deg below the average of fourteen years. With the exception of a few cold days and nights this month has, on the whole, been favourable. Fruit trees, which were very much checked by insects, are now comparatively clean, and making good growth. Apples and Pears, not half a crop. Plums a blank in some places. Unfortunately Potatoes are badly blighted, second earlies especially, and will be got out of the ground as soon as possible.—R. I.

**Orchard and Bush Fruit Pests**

The Royal Agricultural Society of England have issued a sixpenny pamphlet, written by the Society's Zoologist, Mr. Cecil Warburton, M.A., F.Z.S., with the title, "Orchard and Bush Fruit Pests, and How to Combat Them." After giving the ingredients and the methods of preparation of a few of the most useful and readily mixed insecticides, the pamphlet describes a number of commonly occurring insects affecting the leaves, blossoms, fruits, or wood of orchard trees, including, for example, the winter moth, red spider, Apple blossom weevil, codlin moth, Pear midge, the woolly aphis, and goat and leopard moths, with the best methods of preventing their attacks, of checking their depredations, or of destroying them altogether, where possible. The same kind of information is given with regard to various insects infesting Currants, Gooseberries, and Raspberries, such as the magpie moth, the Gooseberry and Currant saw-fly, the Currant clear-wing moth, the Black Currant gall-mite, and the Raspberry beetle. The pamphlet is illustrated with twelve original woodcuts, and is published for the society by Mr. Murray.

**The Scilly Flower Traffic.**

An adjourned meeting of flower growers of the Isles of Scilly was held in the Town Hall, St. Mary's, on Thursday, with Mr. T. A. Dorrien-Smith in the chair. The object was to further consider the offer of the G.W.R. of a reduction in the carriage of flowers. At a former meeting it was decided to ask the manager of the West Cornwall Steamship Company to attend, and Mr. Banfield (the manager of the company) was present. The carriage of flowers between the steamboat and the station costs 10s. per ton, and a letter was read from a contractor in Penzance offering to do the work for 3s. 6d. per ton, but Mr. Banfield thought the G.W.R. would not accept any other carter than their authorised agent. There is a strong feeling among the majority of the growers in favour of an opposition steamboat during the busiest season, February and March, when an average of one hundred tons per week is sent from the islands, at an average cost of about £3 10s. per ton, to land same at Penzance railway station. A motion, proposed by Mr. F. McFarlane, and seconded by Mr. A. Gibson, that the meeting be further postponed until the manager of the steamship company has waited on the directors of the G.W.R. Mr. F. Tonkin said he was in receipt of a letter from a gentleman offering to put a fast steamboat on for the busy season to run to Penzance, Plymouth, or Avonmouth at his own risk if the growers would promise to give him support. If they wished he would come to Scilly and interview them on the matter. The offer is likely to be accepted. If the flowers were sent to Plymouth or Avonmouth it would save the cartage in Penzance, besides lessening the railway journey.

**Minden Roses.**

The usual celebration of the anniversary of Minden is taking place. Minden was fought on August 1, 1759. In this the Lancashire Fusiliers (then the 20th Foot) took a prominent part. A red Rose is generally worn by the Lancashire Fusiliers on this anniversary. The reason for this is ascribed to a tradition that the Lancashires were posted in or near a Rose garden, and that prior to the fight they decked their hats with Roses.

**Marble Hill Park.**

The Richmond Hill View Executive Committee has, for the sum of £72,000, acquired for a public park the famous Marble Hill estate, which embraces sixty-six and a half acres and a splendid old mansion. The park has a frontage of 2,010ft to a portion of the Thames where boating is exceedingly popular, and the council have obtained powers to provide landing stages on the banks. They have completed arrangements with the owners of the adjoining properties—Haversham Grange, Meadowbank, Meadowside, Cambridge House estate, and the land to the south of Orleans House—with a view of ensuring that these shall not be built upon. They have also entered into negotiations with the Earl of Dysart whereby a certain exchange of land has been agreed to upon the Surrey side of the Thames at Petersham, in order to still further safeguard the unique outlook from Richmond Hill.

**Chelsea Physic Garden.**

About a fortnight ago Earl Cadogan formally opened the Chelsea Physic Garden, laboratory, lecture-room, and curator's residence on the Chelsea Embankment. The grounds known as the Physic Garden had been a subject of curiosity for many years during the nineteenth century, until at last the Treasury instituted an inquiry, which led to a scheme for their management being established by the Charity Commissioners in 1899. The site has been used as what would now be called a botanical garden since the time that the Apothecaries' Society secured a lease of it from Mr. Charles Cheyne in 1673. A wall was built round it in the following year, and the Apothecaries' records show that the garden was "in being" three years later. In 1682 (continues "The Morning Post") the Professor of Botany at Leyden visited it and proposed exchanges of seeds and plants. The year after, four Cedars were planted, one of which survives, but is in a moribund state. At the commencement of the eighteenth century the Apothecaries' Society appears to have had some difficulty in finding sufficient funds for the upkeep of the garden, and in 1712 the freehold changed hands, Dr. Hans Sloane having purchased the manor of Chelsea from Lord Cheyne. One of Dr. Sloane's daughters married a Cadogan, from whom the present freeholder is descended. Dr. Sloane was made a baronet in 1716, and in 1722 Sir Hans Sloane conveyed the garden subject to a rent-charge of £5 to the Apothecaries' Society "to the end that the garden might be continued as a physic garden, and for enabling the society to maintain it for the manifestation of the power, wisdom, and glory of God in the works of creation, and that the apprentices of the society and others might better distinguish good and useful plants from those that bear resemblance to them and yet are hurtful." Conditions were attached to the grant, one of which secured the right of the heirs of Sir Hans Sloane to enter into possession of the property and hold it for the benefit of the Royal Society if the Apothecaries should at any time seek to utilise it for building purposes. During the eighteenth century the garden was in practical use, and with the exception of that at Oxford it is the only botanic garden mentioned by Linnæus in the diary of his visit to this country in 1733. It was in that year that the society erected a statue to Sir Hans Sloane which stands in the centre of the garden. In the early part of the nineteenth century the society found some difficulty in keeping up the garden, but in 1862 it was being largely used by medical students. Towards the end of the century the Apothecaries' Society sought to be relieved of their trust, being unable or indisposed to maintain the garden out of their corporate funds, and the trustees of the London Parochial Charities are now trustees of the garden, which will be administered by a representative committee of management. One great disadvantage attaches to the garden in that it is somewhat difficult of access, neither train, tram, nor omnibus service being available.



## A Visit to a Famous Potato Grower.

In connection with the cattle show held in the Bingley Hall, Birmingham, each year, there is always a considerable amount of space devoted to vegetables. Eight years ago I assisted in awarding the prizes in this section, which was remarkable for the grand display of Potatoes staged. When looking over the exhibits after the judging was completed I was astonished to find how frequently the name of "Wells" was attached to the first prize cards, and both myself and colleague declared that the produce which had won the exhibition such distinction formed one of the remarkable displays of the popular tuber we had hitherto seen, as they were models of shape, large without being coarse, and clear and light in the skin. Since that time Mr. D. H. Wells, of Tysoe, Kineton, Warwickshire, has achieved many triumphs at Birmingham and other shows. I was, therefore, highly gratified to have the opportunity of visiting their Potato grounds a few weeks ago.

Tysoe is no modern hive of bustling industry, but a quiet, ancient village, lying beneath the shadow of the famous Edge Hills. As yet the "iron horse" has crept no nearer than five miles from it, and at this point there is only a single line of rails, and between the company which owns it, and another which runs a great trunk line near, there seems to be a studied disregard for the convenience of travellers. Tysoe, however, possesses splendid natural advantages for horticulture, as the soil is for the most part a deep loam of medium texture, in a few instances somewhat heavier, the district being an early one. With the establishment of rapid communication with other parts it must become a great centre for market gardening. I must, however, not dwell upon generalities, but pass on to the Potatoes. Although the soil is good it is not to that alone that success can be attributed, but rather because it receives that thorough culture necessary. Mr. Wells believes in deep digging. He obtains a special spade for the purpose, which is long in the blade, somewhat narrow and light, so that the workman can force its whole length straight into the soil. Soot is the principal manure, and heavy dressings of this are applied at digging time, and again before the Potatoes are moulded, and to this, in conjunction with well worked soil, Mr. Wells attributes the clear skins of his produce.

I have always been an advocate for giving Potatoes plenty of room, but the Tysoe exhibitor goes further in that respect than I have seen anyone else go. The early varieties are planted 2ft apart each way, the late ones 2ft from set to set, the rows being 2½ft apart. With this wide planting there is plenty of room for the air to circulate freely around every plant, with the result that the tops are short-jointed and hard. In many cases they are strong enough to stand perfectly upright, and the tops of most varieties are decidedly shorter than when grown under ordinary conditions. Under this system of culture all varieties are to a great extent disease resisters. Unlike many other cultivators, Mr. Wells does not favour the early planting of late varieties; he considers from the beginning to the middle of May to be the most suitable period, because by the time active growth above ground is in progress the cold weather has usually passed, and the growth is regularly continued without check. My own opinion is that on shallow soil earlier planting is advisable, because during hot seasons growth is considerably curtailed unless the plants have made good progress before dry weather sets in.

At Tysoe great care is taken in selecting tubers for seed. Those which are the result of secondary growth are always rejected, because from a series of experiments it has been found that such late formed tubers seldom if ever ripen properly. If planted they often start strongly, but after a time the tops become stunted and quickly turn yellow. When crops are dug these "secondary" tubers are often just the right size for seed, and Mr. Wells considers that using them for that purpose is often the cause of unsatisfactory crops. He also finds it a great advantage to have at command soils of varying degrees of texture, because different varieties of Potatoes seem to vary much in regard to their requirements. Those which do not succeed on the medium loam at Tysoe usually thrive splendidly when planted on rather stiffer soil, and vice versa.

Tubers of wondrous size are often obtained from plants

having extremely short tops; nor is this peculiarity confined to the present season, as Mr. Wells informed me that the finest samples of Mr. Bresee he ever grew were obtained from plants whose tops were not more than from 9in to 12in in height. All over the country Potatoes have this season grown very irregularly, owing, no doubt, to the cold, wet weather experienced. This state of affairs was only noticeable in a few instances at Tysoe, being the most pronounced in the case of "Ideal."

Mr. Wells speaks very highly of Telegraph and Express among early Potatoes. He also considers Sutton's Favourite, Reading Russet, Reliance, Satisfaction, Ideal, Edgemoor Purple, and Supreme to be excellent varieties for exhibition purposes, as well as for the production of heavy crops for general purposes. Motor is considered the finest late variety. Several of Webb's seedlings are this year being grown. Nos. 1, 2, and 3 appeared to be growing exceptionally strong. No. 5 appeared to me to be a variety of the right type, because although the tops were very strong, they were upright, and we certainly want to get away from those late varieties which have such a spread of top growth.

So far I have only been able to judge of this year's prospects from the appearance of the growth above ground, but I hope to visit Mr. Wells again when digging is in progress, and I shall be much mistaken if I do not then see highly gratifying if not sensational results.

Mr. D. H. Wells is the exhibitor, but in reality there are two brothers connected with the Potato venture, and it is difficult to say which is the more enthusiastic of the two. Working together in perfect harmony, they are doing a good work by showing what can be done with that neglected commodity "land," when energy and good work are brought to bear upon it. To each I tender my heartiest thanks for their ready information and kind hospitality.—H. D.

## The Ubiquitous Microbe.

A correspondent, signing himself "Docteur Ox," strikes a warning note to readers of "Le Matin," and explodes a popular fallacy so fondly cherished for ages past respecting the virtue of town and sewer refuse as a manure for the soil of the country. This, he states, is due to a recent decision of the Minister of Public Works, prohibiting the cultivation upon soil watered with sewerage, of vegetables and fruit destined for raw consumption.

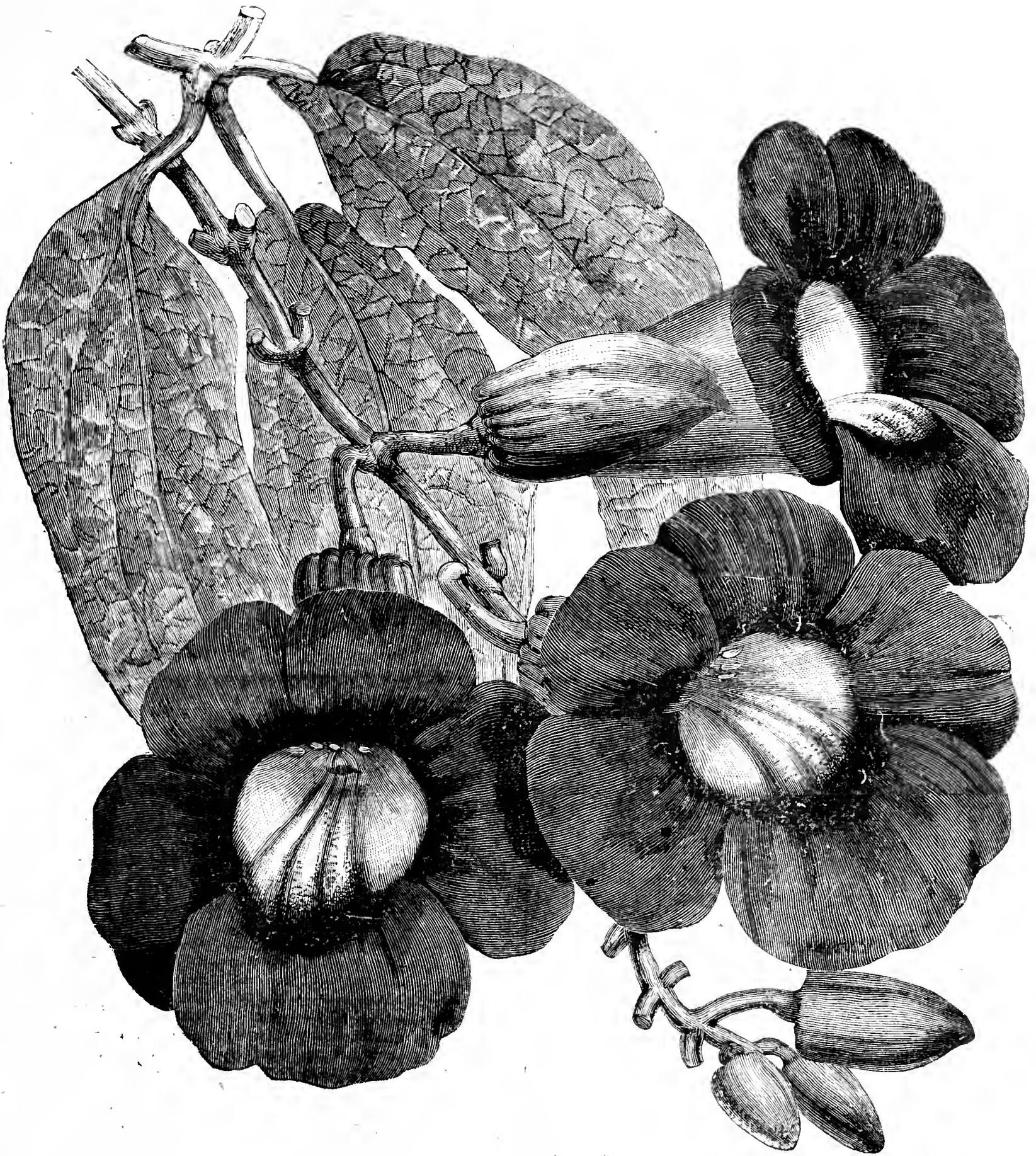
Is sewerage then no longer the most perfect and inoffensive of fertilisers? And the soil of the country, is it no longer the purifying filter it has for all time been thought to be? Vegetables cultivated in this purifying (?) soil are then capable of absorbing microbic germs which ought not to be found there? Fifteen years ago it would not have been well with the individual who had dared to pose such questions, for at that epoch it was duly and firmly believed that

(1) The cultivated soil is the best of filters, in fact, the ideal filter, since not only does it not permit the passage of microbes, but it destroys them. And as proof of the fact, the water flowing in the drains of Gennevilliers was so pure that the members of the official commissions partook of it, and declared it far superior to the best of table waters.

(2) That, moreover, "pathogenous" microbes did not get on very well with the "saprogenous" microbes which polluted sewer water, and that these delicate and aristocratic mischief-makers were unable to support the sickening promiscuousness of the vulgar bacilli of putrefaction, and that in contact with these latter, the former quickly perished.

(3) That the rootlets of plants are also the elective filters which preclude the passage of bacilli lurking about in their neighbourhood. This, moreover, had the endorsement of eminent bacteriologists, who, themselves, cultivated vegetables in soil watered with sewerage, and upon the most careful examination failed to find the least trace of microbes.

Coming from a Government Commissary, these facts seemed weighty enough to dispel the deepest rooted misgivings in any who may have entertained them. But to-day we are rudely awakened to the disagreeable fact that vegetables grown upon soil watered by sewerage are sources of danger, and should not be eaten raw for fear of microbes. Truly this is rather hard. By way of consolation, however, the danger for the present seems to be limited to vegetables which grow about the level of the soil, such as Radishes, salads, &c. Such as grow at a distance from it, like Tomatoes, Artichokes, &c., do not—at present, at least



**Thunbergia Harrisi.** (See page 127.)



—fall under that category. Still, there seems little assurance that later we may not hear that these, like their low-lying kin, may be yoked with the same curse. 'Twould be well to beware, for this opinion may yet undergo some modification.

Sewer water most assuredly does contain pathogenous microbes, and what is equally as sure, they do not become devoured by their saprogenous comrades. And the rootlets of vegetables and plants, ignoring their elective functions, absorb all with the same indifference. Not many months ago a German bacteriologist was curious to know what was the ultimate fate of the tuberculosis bacilli when they finally found their way into the sewers. One might be pardoned for hoping that they became drowned or asphyxiated. But no such luck; far from it; they thrived better there than in the open air or in river water.

It is upon the virulence of a microbe that its vitality depends. For, whereas in river water the virulence of the tuberculosis bacilli is practically nil at the end of ten months, in sewer water it has been found as active at the end of ten months as it was the first day. This same bacteriologist, having met with success in that quarter, was encouraged to ascertain what fate awaited Koch's bacillus when introduced into cultivated ground. Did its virulence become modified? Was it destroyed? Not a bit. He sowed Radish seeds in a flower pot and watered them with sewerage containing tuberculosis sputum which he had previously preserved for forty days. Three months later he found in this cultivated soil the tuberculosis bacilli in all their virulence.

Recently two distinguished French bacteriologists, Messrs. Bourges and Wurtz, have pushed these experiments still further. They resolved to see if it were not possible to find the Koch bacillus in the Radishes, &c., sown in tuberculated soil. To this end three flower pots were filled with soil and sown respectively with Radish, Lettuce, and Cress seeds. They were duly sprinkled from time to time with water containing the Koch bacilli. At the end of a certain period portions of leaves were broken off and inoculated into the peritoneum of several guinea pigs. In eighteen out of thirty cases the results were positive—that is to say, that the tuberculosis bacilli had passed from the soil in which the seeds had been sown into the leaves of Cress, Radishes, and Lettuce. Messrs. Bourges and Wurtz have made a similar experiment with the bacillus of typhoid fever. This time, not eighteen out of thirty, but in every case the bacillus was found with the greatest facility in the leaves of the vegetables experimented upon.

Not only do vegetables absorb microbes, but their process of progressive development assists in drawing the microbial germs from a considerable depth to the surface of the soil.

Pasteur had already demonstrated that in the field of Beauce (Indre-et-Loire) it was the worms which played the rôle of exhumers of microbes, and, bringing to the surface the anthrax spores interred with the sheep which had died of the disease, maintained in that region an epidemic of anthrax. According to Drs. Bourges and Wurtz, plants and vegetables can play exactly the same rôle, and bring to the light, along their stems and leaves, the microbes buried in the depth of the soil.

It is thus easy to account for the periodic epidemics of cholera or choleric diarrhoea, which up to the present have, by their sudden and unaccountable appearance, so perplexed epidemiologists. Whilst this authenticated and interesting experience will be welcome to the epidemiologists, it will be a sorry blow to lovers of Radishes, salads, &c.—("Pharmaceutical Journal.")

## My Four Days' Holiday.

Leaving Swansea by early train on a Tuesday, and passing through many towns, and the country now in its beauty, I arrived at my journey's end. When I alighted at Fareham, distant from Southsea nine miles, I soon found good accommodation, and much enjoyed the refreshments after my long journey. The population of Fareham is about 8,000, and the main street one mile long, planted with Poplar canadensis.

After a rest, I took a stroll round the town, which brought me to a river running to Portsmouth Harbour. Portsmouth's shipping trade is mostly in timber, coal, and flower pots. The shipments from here are mostly pots for the Jersey growers, and no better pots in England are made than those by the Fareham Potteries, the clay being the finest in England. My walk brought me to these potteries, where I soon was introduced to Mr. J. Sandy, J.P., the proprietor. Years gone by Mr. Sandy sat at the bench making pots himself; now he is chairman of the Urban District Council, and of the School Board and other societies connected in the town, and employs more labour than any other firm in this place. I may say from what I gleaned that Mr. Sandy is very popular. Should any of my brother gardeners visit Fareham, it is very interesting to see

how pots are made from size one up to ninety. I thanked Mr. Sandy for the kind way he received me, and, wishing him adieu, I adjourned to my lodgings for the night.

On the second day I was out early and made my way to the Swanwick Strawberry grounds, a distance of six miles, where was seen at the station no less than one hundred fruit vans and hundreds of thousands of baskets for Strawberries. No less than eighty tons in one day have been sent away from Swanwick alone. Strawberries were late. I bought one gallon on my visit, and paid 7s., and I am told the first picking fetched 12s. per gallon. Most sorts are grown, but Nobles and Sir J. Paxton more so; and some are introducing Sir Chas. Napier for late supply. It was a sight to see them. They were all just getting into picking order, and with the favourable weather record crops have been realised.

Bush fruits and Plums are extensively grown, and there is a good set.

After a good rest on Sarisbury Green, I wended my way into the main Southampton Road, planted for one mile straight on each side with Firs. On my right I came to the gardener's lodge at Coldeast House, the residence of C.G. Montefiore, Esq., on entering which I found Mr. Chapman, the steward and gardener, at his office. My walk of about one mile down the carriage drive brought to view fine specimen Rhododendrons in named sorts, all at home in a peaty soil. I noticed fine specimen Abies Douglasi, A. Veitchii, A. amabilis glauca, and Retinospora obtusa gracilis aurea. I also saw the model stables, the clock pointing to 4 p.m.; thence to the entrance of the gardens, which brought me to Mr. Chapman's office as stated, and we were soon "at home." Mr. Chapman was pleased to show me round for about three hours. We came to the frame department, where Melons Windsor Castle and Blenheim Orange are well set. Other frames had just been emptied of early Potatoes. There is also a late lean-to Peach house, all the trees well set. In the stove I found Caladiums done well; also Dracaenas and Crotons of good colour, with fine Clerodendrons, Palms of all sizes, and a fine batch of Cœlogynes, also a good collection of choice Ferns.

We passed on to the walled kitchen gardens, the north wall covered with Morello Cherries, fine crop. On entering the doorway an arch about 100ft long presented itself, and this is covered with Wistaria sinensis and Roses of sorts. On the left is the long early Peach and Nectarine house with Early Grosse Mignonne and Royal George Peaches, Pineapple and Victoria Nectarines. These trees were planted thirty years ago by Mr. Chapman, and they carry a fine set. In the central borders were Sutton's Seedling Marrowfat Pea, six peas in a pod, and all good. The early Black Hamburgh viney was carrying fine bunches and finishing them well. Muscats were good, Mrs. Pince likewise, and no cracking. I never saw such foliage on Vines. Black Hamburgh and Alicante had also a good set.

We now come to the pleasure lawn. Roses are grown by the thousand for cutting. I noticed a fine bed of 150 plants of Papa Gontier (grand), Souvenir de Catherine Guillot, Vistss. Folkestone, Grace Darling, and Enchantress. There were five mounds of hybrid Rhododendrons and specimen Cedars. The mansion is built in the Italian style, and the front planted some thirty years ago with Ampelopsis Veitchii is now completely covering the front and looks grand.

From the terrace one can see Osborne House and the Solent, the evening sun shining on the briny waters. Looking to the right you see Netley Hospital, one of the finest buildings in England, where our invalids are landed on coming home from foreign service. Walking still further brought us to the farms of 500 acres. The late Mrs. Montefiore took great interest in her gardens and was good to the parish. It was now nearly time to catch my train, so after refreshments with Mr. Chapman I thanked him for his kindness and hospitality, and thus ended my second day's outing.

On the third day's holiday I took train to Portsmouth town and viewed H.M. dockyard, a sight worth seeing. Thousands of hands are here employed. From thence I took the electric ear which brought me to Clarence Pier, and heard a splendid concert, then walked about two miles on the Esplanade, which gave a fine sight of the ships. I made my way through Palmerston Road (a fashionable part of Southsea) to the new Town Hall, and closed up with going to the new Theatre Royal.

On the last day of my four days I was up with the lark, and found out the nurseries of Messrs. W. G. Droyer, whom I found very busy finishing the potting up of their specimen Chrysanthemums for large bloom. I should think about 800 plants are here, ranging from 1ft to 3ft high. Mr. W. Droyer, the senior partner, showed me round. Their specialities are Roses, Gardenias, Adiantums, Ferns and Camellias. Having seen all, I left and took excursion to Southsea, and went through the Fleet, a sight I never shall forget. I returned home by the excursion train, arriving at Swansea in the early morning. I would advise any gardener, who has the privilege of a holiday, to go down south. All Hampshire people are very homely. Thus closes the record of my four days' holiday.—SWANSEA.



#### Watering, Feeding, and Selecting Buds.

The most important items just now connected with the culture of Chrysanthemums in pots for exhibition and decoration are watering, feeding and top-dressing, also securing growths, selecting buds, and keeping the plants clear of insects.

The matter of watering is very important, and claims constant attention, especially where a large number of plants are grown. This attention must be systematic, examining the plants thoroughly, in order to see whether water is or not needed. A superficial or casual glance at the pots may often be sufficient for the expert, but the amateur grower needs to be more particular to satisfy himself thoroughly. The experienced grower, however, is always on the alert when making a regular round of the plants. The casual look will not always do, and he must perforce halt to make a more minute examination of the soil. The soil might be to all appearance moist, yet on closer survey water is found to be required. In a batch of plants, comprising various varieties, there are always some of stronger growth, and having a more powerful root system than others. It is these which need more frequent supplies of water, while weaker growers do not need it quite so often.

While on the subject of watering, it is as well to emphasize the fact that water when applied should be given thorough enough to moisten the whole ball of soil and roots, then wait until a similar application is required again. The expert cultivators of course do not need the reminder, as it is an ingrained principle which they seldom overlook. During dry days in the present month the supply of moisture to the roots largely governs the extent of success at the blooming period. Neglect will assuredly tell sooner or later.

Though water is of great moment, it is not advisable if it can be avoided, to use it direct from a cold well or spring or water tap. Means should be provided whereby a few hundred gallons can be exposed to air and sun, so as to become warmed before using. Soft water, if obtainable, is better than hard.

Regular attention will prevent weeds establishing themselves on the surface of the pots. They necessarily abstract food from the soil as well as moisture, impoverishing the material into which a mass of healthy, sustaining roots should permeate for the welfare of buds shortly to form and swell. The filling of the pots with roots furnishes a good opportunity to give the plants a little new rooting material in the shape of a mixture of rich soil, consisting of loam, decayed manure, bonemeal, scot, and superphosphate. A dash of each of the latter will suffice. Apply a layer of this half an inch thick, and press down firmly. A decided impetus to root action will be given, and a mass of young fibres will ramify in the soil. It will be necessary to water the plants with a rosed can for a time, or the soil is liable to be washed into holes. Plants thus treated will not require liquid manure for some time.

As regards general feeding with liquid manure and artificials, it is not desirable to stimulate too frequently at first, nor commence much before buds appear. An occasional weak dose of soot water or a light dusting of an approved Chrysanthemum manure may be given. Soot water made clear by adding lime to it so as to clarify it is useful for occasionally syringing the plants during hot and dry weather. Giving it to the roots in this state is better than when thick.

Stimulants should be varied as much as possible, thus giving the plants a change of food which they will appreciate. Some manures are better adapted for hot weather than others, but no stimulant other than pure water must be applied when the soil is very dry. Nitrate of soda is a stimulant that may be used occasionally only. Dissolve a pound in a gallon of water, and when watering use  $\frac{1}{2}$  pint in 2 gallons of water. It is best used in hot weather. Thomson's and Clay's fertilisers, however, cannot be bettered.

A natural manure with cooling qualities is cow manure. A peck of this in a tub containing 25 gallons of water will make a suitable stimulant. Horse manure makes the best liquid manure for use in wet weather.

Powerful liquid manures may be made from sheep and fowl manure, using about a peck to 30 gallons of water, enclosing the manure in a bag, which sink in the water. It is best to give these strong manures later when the plants have become used to receiving extra food. Avoid the mistake, however, of applying any manure too strong.

A further change of stimulants may be found in the various general artificial manures, using them in solution or by dusting

lightly on the soil at the rate of about a tablespoonful to an 8-inch pot, watering in immediately.

No hard and fast rules can be laid down as to how often to apply manures. During normal weather, when watering is frequently necessary, twice a week ought to suffice, but some varieties will require it oftener. It is best to err in the early part of the bud-forming season on the side of safety. All stimulants can be applied oftener when given weak.

The securing of the growths to prevent damage must be strictly carried out, removing, too, any shoots of a superfluous character, such as side growths on the stem, or suckers at the base.

Selecting or taking the bud which is to develop into the flower must be proceeded with as they appear, rubbing out the side growths surrounding them gradually. One bud on a shoot is enough where large blooms are coveted, hence select the first or second crown bud. These usually appear from the present time onwards, some being early, others rather late. The last buds of all are the terminals, the majority of these not showing until the plants have completed growth in September and October. Good flowers are obtained from these, though upon the whole, smaller in the case of the large Japanese varieties. In the Incurved section, the best flowers are usually grown on the terminal bud.

In regard to the early flowering varieties, the plants are for the most part grown free, allowing them to develop the terminal shoots with clusters of buds. Retain the central one of the cluster, and thin out all but one on each branchlet or side stem. This results in bright, medium sized blooms. With this treatment the Pompon and small flowered varieties perfect excellent clusters of flowers which are much appreciated for cutting for table and vase decoration.—E. D.

### Specialities at Wordsley.

All interested in the production of new and improved vegetables and flowers, and their progressive culture, will find much to interest them in Messrs. Webb's grounds at Wordsley at this time. On a visit there recently, I found excellent work going on, and I was much gratified with many of the results. Tomatoes in pots under glass are extremely fine; indeed, I never saw better plants. They are growing in 10in pots, trained to a height of 4ft or 5ft, with a single stem, and every one is furnished with large clusters of fruit of great weight and fine form. There is no trace of disease, and all are most healthy, much more so than is usually seen when the plants are planted out. Coronation, a new variety introduced this year, is superabundantly prolific; it is red in colour, of medium size, and of superseding quality. Regina is larger, and bears equally well. The older Sensation is larger still, and a splendid type for exhibition. Jubilee and Chancellor also stand out conspicuously, and as a yellow fruiting kind Sovereign is perfect in form and an abundant bearer, possessing a flavour which finds much favour amongst growers.

Peas are also a leading crop. This year there are 120 varieties on trial. Some are excellent, others useless; but the result of the trial will be of the utmost service in conclusively indicating what to recommend and what to avoid. No special favours are shown to the firm's own varieties, but some of these come out well. Senator, raised at Wordsley some years ago, has recently been awarded a First Class Certificate by the Royal Horticultural Society in the Chiswick trials, a distinction it well merits. It attains to a height of about 3ft, is enormously prolific, with medium sized, well-filled pods, and the seeds when cooked are delicious. Wordsley Wonder, an old favourite with the public and the writer, still shines as a good one amongst all. Senator and this are two of the best market Peas. As a tall growing sort, Stourbridge Marrow is an excellent type, being strong in the haulm and an abundant bearer. Masterpiece eclipses that well-known variety, Ne Plus Ultra, in flavour, which is a strong recommendation. Chancellor, Royal Standard, and Mainstay are all main-crop varieties of great merit. A new variety, not yet in commerce and unnamed, need not be detailed; but having seen it two years running, I am convinced there is a coming main-crop Pea of inordinate properties in store for us.

Lettuces have been a speciality with me for long. Their cultivation and use is on the increase, and rightly so, too. Few, perhaps, have tried them as a boiled vegetable, but they make a delicious dish. A splendid batch of them is now to be seen at Wordsley. There are large brakes of about a score kinds—all were sown and planted at the same time. Some are now running to flower, others are in perfection, and it is these we want, as a Lettuce that hearts, and is quickly over, is never serviceable. Some of the Cos varieties fold nicely; others produce a tuft of leaves which show little disposition for this, unless tied, a process that never brings as good and crisp a Lettuce as the



natural fold. Some of the Cabbage Lettuce had hearts almost as large as a soup plate, and hard and clean. Criterion, Paragon, and Summerhill are such, and no one could imagine or desire finer varieties. As a smaller and more compact variety, Model is perfect. The best of the Cos varieties were Wordsley Gem, Monstrous White, and Exhibition. These are all self-folding, and fine in size and form.

Broad Beans were most interesting. Some had grown well and clean, while a neighbouring kind had been nearly a failure in growth, and quite unprofitable. It can hardly be imagined that Broad Beans are so varied in constitution, yet seen here it would appear that some are subject to the fly and others not. The most healthy and productive were the gigantic Green Longpod, Mammoth Longpod, and Improved Windsor.

Emperor Cabbage is one I have grown for many years, and the annual demand for it is so increasingly great that it is treated as one of the best; and I certainly give it this distinction, both in my own garden and as seen at Wordsley. It is right in size and quality, and displays no freaks. The acres of it now maturing seed at Wordsley indicate the demand it has.

In the glass houses, Gloxinias and tuberous Begonias are really grand in development and colours, and afford seed which produces plants that charm all who grow them. As indicating the substantial way they are grown, I was shown plants that had recently been at Aberdeen, at the Highland Society's exhibition there, and the long journey had tarnished them but little. Thousands of young Cinerarias and Primulas in frames made me wish I could see them in flower, when that occurs.

Here, as everywhere, Sweet Peas were in crowds, and over 100 varieties were represented. Some were fading, others were at their best, with later ones coming on. Seeds for the earliest are sown in the open in November. These flower at the end of May or early in June, and the spring-sown ones follow. But the Wordsley firm think there are too many varieties being offered, and I agree with them. All are certainly not distinct and of special merit, and it is with the object of securing the very best only, and offering a careful selection, that the trial is going on.

Stocks were in their first flush of beauty, and a magnificent display, both in colour and form, was seen. How charming a good selection of these are! Seedling Carnations are a special feature. The plants are well grassed, and have abundance of strong, well thrown up stems, and blossoms in arnfuls. Ninety per cent. of them come double-flowered. Individually, the blooms are as large and purely coloured and formed as those of named varieties, but they have far better constitutions than the latter, and as furnishing cut flowers they are invaluable. These hardy seedling Carnations are rarely affected with the ills which many of the named kinds fall into and they cannot be too extensively grown. Amongst Tropæolums Webbs' New Meteor, as seen in long ribbon borders, is the most true and compact of the class, and its innumerable flowers are such a bright scarlet as to suggest it is a substitute for the everlasting "scarlet Geranium."—AN ESSEX GROWER.

## Societies.

### R.H.S., Scientific Committee, July 22nd.

Present: Dr. M. T. Masters (in the chair); Messrs. Hooper, Odell, Nicholson, Worsdell, Bowles; Drs. Müller and Cooke; Revs. W. Wilks, and G. Henslow, hon. sec.

*Leucoium droppers*.—Mr. H. H. Benton Bradley, of Sydney, sent additional illustrations of bulbs of *Leucoium*, showing two bulbs, one above the other; also similar bulbs artificially separated and both growing when planted.

*Prairie Bean*.—Mr. Wilks showed specimens from Kansas, remarkable for flowering before the leaves appear. They were referred to Mr. Nicholson.

*Paris with variable number of Leaves*.—Mr. Odell showed several flowering stems with five leaves instead of four. The number is constant on the plant. The late Prof. J. S. Henslow wrote a paper on "The Varieties of *Paris quadrifolia*, considered with respect to the ordinary Characteristics of Monocotyledonous Plants" (London's Mag. Nat. Hist. vol. v., p. 429, 1832).

*Kleinia*.—Mr. Odell also showed specimens of this S. African plant, in illustration of its climbing habit.

*Peperoma*.—He also brought specimens of a minute species from Burmah.

*Bulbs pierced by Couch Grass*.—Miss Willmot forwarded specimens. The process is described as done by a ferment secreted by the tip of the rhizome, by M. A. Prunet (Sur la perforation des tubercules de pomme de terre; Rev. Gén. de Bot., avec illustrations).

*Plum with foliaceous Calyx*.—Mr. Hooper showed some blossoms of a Victoria Plum tree with small but distinctly leaf-like sepals.

*Nectarine-Peach*.—Dr. Masters received a fruit from Mr. Rivers, one-third of the skin being that of a Nectarine, and the rest that of a

Peach. It came from a Peach tree raised from the stone of a Nectarine many generations ago.

*Sugar Pea*.—Mr. Eckford sent examples of this Pea, remarkable for its semi-succulent, edible pod, known in France as *Pois sans parchemin*. It has produced three varieties, cultivated in France.

*Poon-yet Resin*.—Dr. Cooke read an account of this resinous-like substance prepared by bees in trees in Burmah. Their nests are entered by small passages lined with the resin, which is continued outside in the form of a trumpet. It is probably formed by a mixture of substances.

*Potatoes diseased*.—Some small tubers were sent by Mr. Eckford, which Dr. Cooke undertook to examine.

### Royal Horticultural—Drill Hall, August 5th.

There were but few exhibitors at this show, doubtless owing to the Bank Holiday and the general season of recreation. The quality of the exhibits staged was well up to the usual standard, and must have well rewarded any who paid the show a visit. Messrs. Wm. Bull and Sons' Crotons were very fine, and attracted a good deal of attention. Carnations were very much in evidence, but only as cut specimens.

#### Fruit Committee.

Present: Messrs. H. Balderson, Jos. Chéal, W. Baxter, S. Mortimer, Alex. Dean, Wm. Pope, Horace J. Wright, George Kelf, J. Jacques, J. Willard, A. H. Pearson.

*Fruit Committee, List of Awards*.—Gold Medal to Miss Adams, South Villa, Regent's Park, N.W. (gardener, Mr. Geo. Kelf), for collection of fruit; Silver Banksian to Messrs. Harrison and Sons, Leicester, for culinary Peas; Silver-gilt Knightian to E. A. Hambro, Esq., Hayes, Kent (gardener, Mr. Beale), for Black Hamburg Grapes.

On plates in the foreground Peaches, Bellegarde, Royal George, Barrington, and Dr. Hogg, were represented by nicely coloured and even sized fruits; Melons, Hero of Lockinge, Frogmore Scarlet, and Sutton's Scarlet; Grapes, Black Hamburg, Buckland Sweetwater; Raspberries, Superlative, together with Gooseberries, Plums, and Cherries in variety, were all in splendid form. The entire collection was a fine illustration of what can be produced in the proximity of smoke and other conflicting difficulties, all the specimens being from within two miles of Charing Cross. Palms, Crotons, and other stove plants were used to effect on the stand.

Mr. William Beale, Hayes Place Gardens, Hayes, Kent, sent six finely coloured and finished bunches of Black Hamburg Grapes. Two of the bunches exhibited must have scaled nearly 6lb each, and they were the produce of a Vine known to be about 100 years old, and, judging by them, the Vine must be in splendid vigour.

Miss Adamson, South Villa, Regent's Park, N.W., (gardener, Mr. G. Kelf), again exhibited one of her characteristic collections of fruit. The exhibition was backed by Plums in variety in 14in pots, well furnished with fruit, and looking in fine condition.

Messrs. Harrison and Sons, Leicester, were represented by seventy-seven varieties of culinary Peas, many fine pods being staged. Telephone, Duchess, Magnum Bonum, and Sutton's Seedling were worthy of special note.

Messrs. Laxton Bros., Bedford, sent a box of their new late Strawberry Trafalgar, a cross between Latest of All and Frogmore Late Pine. The fruit is of good size, even in form, but the colouring pale. It remains to be seen if it will prove a good traveller, but its appearance would not appear to warrant that quality.

#### Floral Committee.

Present: Messrs. Wm. Marshall, H. B. May, Geo. Nicholson, John Jennings, Jas. Walker, J. F. McLeod, J. Reuthe, C. R. Fielder, Charles Dixon, F. Page Roberts, J. W. Barr, W. P. Thomson, Charles E. Shea, E. H. Jenkins, W. J. James, J. H. Fitt, Harry Turner, Wm. Howe.

*Floral Awards*.—Silver Flora Medal for group hardy flowers, Mr. M. Prichard, Christchurch, Hants; Silver Banksian for group of Zonal Pelargoniums, Messrs. Hobbies, Limited, Dereham; Silver Banksian for group of Phloxes, &c., Messrs. T. S. Ware, Ltd., Feltham; Silver Banksian for group of Carnations, Mr. C. Turner, Slough; Bronze Banksian for group of Carnations, Mrs. M. V. Charrington, Edenbridge; First Class certificate to Libocedrus, macrolepis, a fine species of delicate green colouring, glaucous on lower surface of leaves and branches. The general appearance is not unlike a large species of Selaginella, Messrs. Jas. Veitch and Sons, Limited, Chelsea. F.C.C. to Astilbe chinensis (max), var. Davidi (Franchet), a splendid variety about 5ft in height, with large but much divided foliage. The flowering spikes are borne well above the foliage, and the flowers are of a beautiful rosy mauve colour, and very light and feathery. Award of Merit to Carnation Bookham White Clove, a variety with a delicious fragrance and of firm form, Mr. Jas. Douglas, Bookham. Award of Merit to Carnation Cedric, a yellow ground with reddish crimson markings.

Award of Merit to border Carnation Mrs. Leigh White, a very vigorous white with delicious fragrance.

Lord Ilchester, Holland House, Kensington, sent *Eichornia crassipes*, an aquatic plant seldom seen in bloom. The colour is mauve; also *Hibiscus rosea sinensis* brilliantissimum in fine form.

Lady Ardilaun, St. Anne's, Clontarf, Dublin (gardener, Mr. A. Campbell), sent several vases of good quality border Carnations.

Messrs. Hobbies, Limited, Dereham, were effectively represented by a fine collection of Zonal Pelargoniums in variety. Cut blooms were arranged in vases and stands of several descriptions, and the decorative value of this flower well illustrated. Amongst those of special merit were Mrs. Ashworth, a semi-double white; Mrs. Corder, a rosy salmon; Aquarelle, pink and white, and double Jacoby. Many others were shown, and the use of



A Basket of Achimenes. (See page 127.)

*Asparagus Sprengeri* and *Coeos Weddelliana* added much to the general effect.

Mr. M. Prichard, Christchurch, Hants, staged a large collection of hardy flowers of much merit. The *Gladioli* at one end of the exhibit were well worth noting, and *G. Demi-Deuil*, a violet; *Menelik*, a rich crimson; *Lacordare*, brilliant red, were fine specimens of this flower.

Messrs. J. Cheal and Sons, Lowfield Nurseries, Crawley, sent hardy flowers and shrubs, amongst the former *Aconitum bicolor* and *Draacocephalum virginicum album* were in good form. The same firm also staged Sweet Peas and *Cactus Dahlias*, William Jowett, rich crimson, and Mrs. A. F. Perkins, a primrose and white, being good examples of the last named.

Mr. E. Potten, Camden Nursey, Cranbrook, Kent, had a nice collection of hardy flowers, chief amongst which were *Gaillardia grandiflora hybrida*, *Trollius europæus Improved*, in splendid form. *Achilleas*, *Spiræa*, *Pentstemons*, and *Phloxes* in variety were also shown; a bright and attractive little exhibit.

Messrs. T. S. Ware, Limited, Feltham, were represented by a group of *Phloxes* of many beautiful colours and shades, chief amongst those which called for attention were *Stendal*, a lovely cerise; *P. Selection*, a rich mauve; and *Pacha*, a dwarf pink; *Delphiniums*, *Lobelia cardinalis*, *Agapanthus umbellatus*, and *A.*

*umbellatus alba*, together with many other well known hardy plants were shown, and a very effective and pleasing stand was thus obtained.

Messrs. J. Peed and Sons, West Norwood, staged a collection of *Achimenes* in variety, backed by Palms, *Abutilons*, and variegated *Acacias*; amongst those of special merit we noticed *A. longiflora alba*, white with purple colouring at the top of tube; *A. Lavender*, a good sized mauve; and *A. Verschaffelti*, a smaller flower with purple stripes on a white groundwork. The old variety, *A. eoccinea*, was represented by nice floriferous specimens.

Mr. Charles Turner, The Royal Nurseries, Slough, sent six dozen cut blooms of Carnations. *Agnes Sorrel*, a self crimson, was a nice flower. Amongst the yellow grounds, *Duke of Alba* and *Artisan* are fine flowers: large size and good quality were much in evidence.

Messrs. Wm. Bull and Sons, Chelsea, staged a collection of *Crotons*, whose health, vigour, and brilliant colourings in many varied forms reflect great credit upon this old and well-known firm.

Messrs. Barr and Sons, Long Ditton, sent *Lathyrus latifolius* Apple Blossom, very similar to *L. delieatus*, also *Reseda alba*, a hardy herbaceous Mignonette, and many other interesting plants.

Messrs. B. R. Cant and Sons, Colchester, had two vases each of *Roses*, those being the new Tea Mrs. B. R. Cant, and H.P. Ben Cant, now too well known to need comment.

Messrs. Phillips and Taylor, Lily Hill Nurseries, Bracknell, Berks, staged about fifty varieties of Carnations and twelve of Sweet Peas. Mrs. Jno. Sebright, the new rose, turning to mauve with age, was well shown, and many other varieties, representing all sections of border Carnations. Mrs. W. V. Carrington, a lovely flesh white, is a fine flower, and worthy of inclusion in any collection however small.

Mrs. M. V. Charrington, Edenbridge, staged a number of vases of border Carnations, many being only recent introductions. The Gift, a yellow ground variety with crimson markings; Edward Charrington, Coronation, and several seedlings as yet unnamed were very interesting items on the table.

H. Balderson, Esq., Corner Hall, Hemel Hempstead, sent Carnations, Gladys Taylor, a flesh pink with little scent, but fine form, and C. Mary Francis, a yellow ground variety with crimson margin.

Messrs. Jas. Douglas, Edenside, Gt. Bookham, staged border Carnations in variety, the most worthy of notice being *Palatin*, Bookham, White Clove, Mrs. Prinsips, Czarina, Countess of Verulam, and Monarch.

Dr. Bonavia, Westwood, Richmond Road, Worthing, sent buff coloured *Oleanders*, which originally came from Hyères in the South of France, and is very floriferous and of delightful odour. The specimens exhibited were cut from plants in the border of a greenhouse, and were very lovely.

Messrs. Van Meerbeek and Co., Helligom, near Haarlem, sent three seedlings of *Calla Elliotiana*.

Messrs. Wm. Bull and Sons, Chelsea, sent *Imantophyllum cyrtantho-mineatum*, very pale orange in colour. Amongst those worthy of special note were the well-known *Prince of Wales*, C. Davis, C. Read, making fine specimens of the large leaved section, and C. Thomsoni.

#### Orchid Committee.

Present: Messrs. Harry J. Veitch, James O'Brien, J. G. Fowler, de B. Crawshay, H. M. Pollett, E. D. Hill, H. T. Pitt, F. W. Ashton, G. F. Moore, J. M. O'Dell, W. H. Young, J. Charlesworth, H. A. Tracy, H. Little, Jeremiah Colman, Jas. Douglas.

Cultural Commendation to Capt. Holford, C.I.E., Tetbury, for *Vanda ærulea*. First Class Certificate to L.-C. Adolphus superba, *L. einnabarina* x C. Acklandæ (Messrs. Charlesworth and Co., Bradford), a fine flower, the segments of which are rich orange mottled with chocolate, the labellum being pale yellow, with a lip beautifully orange red with a velvety appearance. Silver Flora Medal for group of Orchids to Capt. Holford, C.I.E., Tetbury. Silver Flora for group of Orchids to Messrs. Hugh Low and Co., Enfield.

Captain J. L. Holford, C.I.E., Tetbury, contributed a group of *Lælio-Cattleyas*, *Vanda ærulea*, and *Cypripediums* in variety. L.-C. elegans was splendidly shown, and *Epidendrum fragrans* was well flowered. *Cyperus alternifolius*, *Adiantum cuneatum*, and *Asparagus Sprengeri* with *Coeos Weddelliana* were used to effect in a small but pleasing group.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, staged a fine collection of *Cattleyas gigas*, C. Gaskelliana, C. Harrisoni, &c. *Cypripedium niveum* and *Cynoches chlorochilon* were also well shown. A group rich in colour and pleasingly staged.

Messrs. Charlesworth and Co., Heaton, Bradford, staged *Cypripediums* in variety. *Lælio-Cattleya purpurata*, Schilleriana, *Cattleya Germania superba* also being very fine.

From H. Little, Esq., The Barons, E. Twickenham (gardener, Mr. A. Howard), came a fine inflorescence of *Cattleya gigas*, Little's variety, bearing three grand blooms.



### Sandringham (Norfolk), July 23rd.

There is not a more popular event in the Eastern Counties than the Sandringham Horticultural Show. During the morning the roads leading to Sandringham Park, wherein the show was held, were thronged with holiday-making crowds, and every train that came into the station was heavily loaded.

When Prince of Wales, the King and his beloved consort attended the show in person, but although absent in body this year his spirit was undoubtedly in his old home, and one had only to take up a schedule to see the generous way in which Their Majesties had assisted the show, as on every page one found the words "Prizes given by Their Majesties the King and Queen."

Every class was well filled, and in many cases the produce was of such uniform merit that the judges found their task very difficult. The hon. sec., Mr. G. W. Gayford, Wolferton, is to be congratulated on the way in which he carried out his arduous duties. In addition to the many competitive exhibits there were many honorary displays; the two chief exhibits were from Messrs. Daniels Bros., Norwich; and from "Hobbies," Ltd., (John Green), Dereham. The former staged a collection of herbaceous cut bloom, several new varieties of vegetables, especially Peas, and a good sample of the luxurious Loganberry. From Hobbies, Ltd., came a large exhibit of Sweet Peas, Roses, and new Dahlias, covering 40ft of staging. Some fine examples of the much discussed new Sweet Pea, White Wings, were staged, and a remarkable pyramid of the new Everlasting Pea, *Lathyrus latifolius grandiflorus albus*. One of the trusses had no less than forty-one fully developed blooms on it, but there was a suspicion of fasciation in it; however, the average was twenty.—P. E.

### Prescot, July 31st.

The inhabitants of Prescot have good reason to thank Lord Derby for placing a portion of the beautiful Knowsley Park at the disposal of the committee, as no more ideal place could be found in which to hold a show, there being an abundance of promenade space, with splendid foliage effects. The special attraction was for a group of plants arranged for effect, a valuable silver bowl being presented by the Hon. Arthur Stanley, M.P. Three entered, with the result that the prize went to Mr. W. Lyon, gardener to A. Mackenzie Smith, Esq., Bolton Hey, Roby, with a most tasteful arrangement, in which quality played a great part. Mr. H. Ogden, West Derby, put up a very effective second; and Mr. J. George, gardener to T. Hensham, Esq., Whitefield House, a good third.

Stove and greenhouse plants were fairly well shown, the lead being taken by Mr. Geo. Osborne, gardener to Dr. Cook, The Brook, who had a fine *Bougainvillea Sanderiana* and *Ixora Pilgrimi* as his best stove and greenhouse plants. *Caladiums* were very fine from Mr. T. Eaton, gardener to Jno. Parrington, Esq., Roby Mount. Nothing could have exceeded the beauty of the *Begonias* and *Gloxinias* which were put up by Mr. Bagnall, gardener to C. F. Boston, Esq., Charlwood House, Huyton. For four greenhouse plants in flower, Mr. Osborne left all comers, staging a splendid *Bouvardia* and *Fuchsia*. Cockscombs and Sweet Peas left nothing to be desired, Mr. P. Greene, gardener to Col. J. Gee, Allerton, winning. A capital *Croton* was the best foliage plant, Mr. Osborne winning with *Hispida Sanderiana* as the best flowering plant. The *Coleus* from Mr. George were finely grown, but wanting in colour. A beautiful specimen *Nepenthes* was the best rare and curious plant, and reflected great credit on the exhibitor, Mr. Osborne. Cut flowers were of the highest quality, Mr. P. Greene, gardener to Col. Gee, Allerton, winning in herbaceous, although the second, from Mr. George, was really admirable.

Fruit classes were superb in every respect, Mr. J. Eaton taking the lead for four dishes with capital Black Hamburgh Grapes and Elruge Nectarines. Mr. B. Ashton, gardener to the Earl of Lathom, Lathom House, Ormskirk, was a close second; and Mr. Oldham, gardener to Joseph Beecham, Esq., Ewanville, Huyton, a close third. Mr. Oldham secured the black and white Grape classes with Black Hamburgh and Muscat of Alexandria. Buckland Sweetwater was the excellent exhibit of Mr. Ashcroft, gardener to P. Walker, Esq., West Derby; extra quality Madresfield Court—for any other black—coming from Mr. Wilson, gardener to H. Cunningham, Esq., Gorsey Cop, Gateacre. Mr. Eaton and Mr. Ashton simply led the classes for indoor and outdoor fruit.

The vegetable classes were a veritable triumph for Mr. Ashton, who in the collection of twelve defeated the great local champion, Mr. J. Rainford, and won for French Beans, Vegetable Marrows, Cauliflowers, Potatoes, Carrots, Tomatoes, and Onions.

There was a great display by the trade, Messrs. Dicksons, Ltd., Chester, a fine selection of cut flowers; H. Middlehurst, Sweet Peas; Alex. Dickson and Sons, Ltd., Newtonards, a superb collection of Roses, old and new, amongst the latter being Lady

Derby, a Rose of fine form to be noted again; Caldwell and Sons, Knutsford, brought Roses and herbaceous flowers in variety, and last but not least the handsome stand of Carnations from Mr. C. A. Young, Floral Nursery, West Derby.

The day was fine, attendance large, and the courtesy of secretary, Mr. W. Case, and his assiduous committee unbounded.—R. P. R.

### West Derby, August 4th.

There could be no mistaking the increased interest which is being taken in horticulture generally, the West Derby Show giving ample proof each year by the larger entries and an altogether higher tone in every direction, the Rector, the Rev. Percy Stewart, recognising the fact by kindly placing the large and commodious field adjoining the Vicarage at the disposal of the committee. The groups of plants denoted a very special improvement, and with the exception of a somewhat unfinished edging pervading them, the three arranged were of very excellent merit. Mr. George Osborne, gardener to Dr. Cook, The Brook, gained the lead with a smart circular group in which the mound principle did not intrude upon the beauty of other valuable plants interspersed. A capital second came from Mr. J. Knowles, gardener to Mrs. Heywood Bright, but it was lacking the bright colour of the former. Mr. H. Ogden, West Derby, was third. Stove and greenhouse plants were small but in good condition, Mr. G. Osborne having for his four *Gloriosa superba* (fine), *Crotons Reidi* and *Carrieri*; also for *Ixora Williamsi*, *Croton Heathi elegans*, as the best flowering and foliage single specimens.

A magnificent double *Begonia* was staged by Mr. J. Knowles. *Liliums* were very moderate, Mr. George Osborne winning also with Palms and table plants. Herbaceous cut flowers received primitive treatment in the matter of staging, and the committee would do well to see that they are named for the future. This for the benefit of visitors. Mr. Ogden here asserted his clever superiority. Mr. J. Ashcroft, gardener to W. Leeming, Esq., had fine flowered Sweet Peas, and Mr. Ogden the best bouquet. A spray consisting of *Bouvardias* and *Roses* came from Mrs. Calvert. Baskets had no redeeming feature to recommend them.

Fruit was small in entries, Mr. Gaunt winning with excellent Muscat of Alexandria, Mr. Ashcroft with Buckland Sweetwater and large Black Hamburgs. Dahlias and Roses were not up to the usual merit, owing to the precarious season. Vegetables were excellent, Mr. G. Osborne coming to the front for twelve Globe Artichokes, Leeks, Onions, Carrots, and Cauliflowers being extra, but again no name. A champion collection came from Mr. Ashcroft, but this was disqualified for containing thirteen varieties. A certificate of merit was awarded to Mr. Davenport, gardener to R. Le Doux, Esq., for a handsome collection of Orchids, including *Laelia Iona*, *Oncidium Kramerianum*, and some fine forms of *Odontoglossum crispum*. Mr. C. A. Young, Floral Nursery, West Derby, had a superb table of plants, a background consisting of pyramids and Sweet Peas alternating with *Hydrangea paniculata grandiflora*, second row of Sweet Peas in vases, and a stand of cut blooms of all the choicest Tree Carnations. New seedlings from Mr. Young's celebrated Northern collection were: Miss Maud Young and Miss Molly Cleaver, fancy yellow grounds; Lord Kitchenier, a splendid scarlet self; and Miss Lily Babcock, a snow white. A certificate was never more worthily granted. Mr. C. A. Young makes an ubiquitous chairman, Mr. Rose an admirable secretary, and Mr. John Young a most courteous assistant.—R. P. R.

### Basingstoke, August 4th.

The summer exhibition was held in Goldings Park, and was in every way a success. The classes were well filled, while the quality of the exhibits left little to be desired. Plants were, perhaps, the weakest feature. In this section there were fewer exhibitors. The leading class was that for a group of miscellaneous plants arranged for effect in the shape of the letter D. Mr. Best, gardener to F. R. Leyland, Esq., The Vine, Basingstoke, just succeeded in winning premier place by the quality of the plants employed, and by a slightly better disposal of them. Palms, *Crotons*, Orchids, and Ferns showed to effect here. In the second prize group from Mr. C. Harvey, gardener to W. W. Perral, Esq., Southington, Basingstoke, the Palms were especially healthy and lightly arranged, but the general arrangement was a trifle flat. In the class for nine specimens, Mr. J. Wasley, gardener to J. B. Taylor, Esq., Sheffield Manor, Basingstoke, was an easy first with fairly good examples of *Ixora Thompsoni*, *Bougainvillea Sanderiana*, *Kentia Belmoreana*, *Cocos Weddelliana*, and a handsome mass of *Lilium lancifolium album*. With a grandly flowered example of *Acalypha Sanderiana* Mr. W. Hunt, gardener to J. Moss, Esq., Fern Hill, Blackwater, won the premier award for specimen plant in flower. Mr. Best staged grandly coloured pyramidal trained *Coleus*. Mr. Hunt had the best *Geraniums* and *Gloxinias*—well flowered examples. Tuberous *Begonias* were excellent. For nine, Mr. W. Green, gardener to S. E. Bates, Esq., Marydown Park, Basingstoke, easily secured the leading position. Mr. C. Kew, The Common, Basingstoke, staged freely flowered if not large *Fuchsias*.

Cut flowers were a distinct feature of the show, so numerous were they. The prizes for Roses were keenly contested. Mr. Neville, gardener to F. W. Flight, Esq., Twyford, Winchester, won for twenty-four and for twelve distinct, staging medium-sized fresh examples. Mrs. E. Mawley, La France, François Michelin, and A. Colomb were noteworthy. Mr. Wasley followed with a creditable set. Mr. Neville also secured the leading position for twelve Carnations, with neat examples of the popular varieties, including a handsome self pink coloured seedling, Mrs. Flight.

Hardy cut flowers are always a feature at this show. Messrs. B. Ladhams, Limited, offer prizes for the best collection arranged in a space of 6ft run of tabling, which brought a keen competition and good produce. Mr. W. Hunt easily won the premier award with huge bunches of Gaillardias, Pentstemon Newbury Gem, Chelone barbatum, Stenactis speciosus, and Coreopsis Eldorado, quite the best of this family. Mr. Tamplin, gardener to W. R. Mitchell, Esq., Down Grange, Basingstoke, was a capital second. For twelve bunches hardy herbaceous Mr. Hunt again secured the leading award with a grand exhibit of similar produce, also including Achillea The Pearl, Monarda didyma, Eryngium amethystinum, and Aconitum napellus. Mr. Wasley a good second. Sweet Peas were a distinct feature, no less than eleven competitors taking part in the class, provided with a grand lot of blooms of popular varieties. Mr. S. Clifton, Winchester, was the leading prizetaker. Mr. Tamplin second.

A separate tent and special classes were set apart for ladies, which proved a great success, as it always does at this show. For the best decorated table suitable for six persons there were four competitors, and as all possessed much merit, the display was a good one. Miss Wadmore, Brook House, Basingstoke, won the coveted award with an arrangement that left little to be desired; it was bright in colour, harmonious, and lightly disposed. With an arrangement of pink coloured Ivy-leaf Geranium and grasses Miss Gosling, Basingstoke, secured the second award. For the best arranged stand of wild flowers, grasses, and berries there was keen competition. Mrs. Thorne, Winchester Street, Basingstoke, was first with a superb exhibit. Miss Kate Wadmore a close second. For a stand or vase of flowers and fruit an attractive display was made. Here again Miss Wadmore once more displayed her fine taste by securing the leading award for an arrangement that left little to be desired. Mrs. Thorne second. Miss Nellie Wadmore won first prize for a pair of stands or vases with a choice mixture of flowers, &c. The best floral basket, arranged for effect, was one from Miss Wadmore that displayed every flower it contained to perfection.

Fruit was, as it usually is here, most meritorious. For a collection of six dishes, Pines excluded, Mr. Hunt just secured the leading award with well finished Black Hamburg, good Cardinal Nectarines, fair Peaches, and excellent Figs. Mr. Bowerman, gardener to Lord Bolton, Haekwood Park, Basingstoke, second. For two bunches Black Hamburg Grapes there was brisk competition, Mr. Tamplin winning with examples of good shape, yet wanting a trifle more in colour; Mr. Bowerman following. For two bunches any other black variety, Mr. Wasley secured the coveted position with Madresfield Court, fine in berry and finish. Mr. Hunt followed with Muscat Hamburg, Mr. Bowerman staging Appley Towers in good condition for third prize. For two bunches of Muscat, Mr. Hunt depended upon Muscat Hamburg, while Mr. Wasley had Muscat of Alexandria, securing the prizes in the order here given.

Vegetables were exceedingly fine in quality and numerous. For the prizes offered by Messrs. Sutton there was keen competition. Mr. Kneller, gardener to Sir W. Portal, Malshanger Park, won for six varieties with exceedingly fine Ailsa Craig Onions, Snowdrop Potato, Perfection Tomato, Autumn Mammoth Cauliflower and Perfection Peas. Mr. Bowerman a good second. Mr. Best won the leading position in the class in which Messrs. Webb provided the prizes, Mr. Bowerman taking a similar place for the society's prize for eight kinds.

Non-competitive exhibits were numerous, Messrs. B. Ladhams and Son, Shirley, Southampton, had a charming collection of herbaceous flowers, in which Coreopsis Eldorado, Rudbeckia lutea conspicua, Gaillardia Bownham's Queen, Rubus noctkatis, Lilium chalcodonium, and Eryngium alpinum were conspicuous objects. Messrs. Wadmore, plants, flowers, and vegetables, making an attractive exhibit. Mr. W. Breadmore, Winchester, had a remarkably fine exhibit of Sweet Peas, which were much admired.

### Abbey Park, August 5th and 6th.

With the accompaniment of flower show weather this great event of August Bank Holiday was held as usual in the Abbey Park. Several large tents were filled with exhibits of a high order of merit, and in addition, the Park itself, which under the care of Mr. John Burn is admirably kept and exceedingly gay, was full of attractions, chief among them a number of tubs of Sweet Peas, the tubs about 2ft or so in diameter, one variety only in a tub. The plants had made a vigorous growth, and were carry-

ing splendid heads of bloom. They were the admiration of everyone who saw them.

One tent was occupied by a line of splendid groups from six competitors, all following the method of arrangement made familiar to us by Mr. James Cypher, who hitherto, we believe, unbeaten in this particular line this season, had to submit to defeat in the person of Mr. Thompson, gardener to G. H. Turner, Esq., Littleover, Derby, which group was rich and not too crowded. Mr. W. Vause, Leamington, was third, and three other prizes were awarded. With six stove and greenhouse plants, Mr. Blakeway, gardener to P. H. Muntz, Esq., Rugby, was first; Mr. W. Vause, second; and Mr. W. Finch, third. Exotic Ferns were shown in sixes, and the best specimen plant was Allamanda Hendersoni from Mr. H. Blakeway.

In the cut flower tent Roses were a leading feature, and there was a very good display. The best thirty-six varieties came from Messrs. A. Dickson and Sons, Newtonards, Belfast, who had some finely developed blooms. Chief among them Etienne Levet, Mildred Grant, Her Majesty, Horace Vernet, Mrs. J. Laing, Souvenir de Charles Grahame, a rich-coloured Hybrid Tea, &c. Messrs. Harkness and Co., Hitchin, were second with a very good lot of flowers for the season, chief among them Mrs. J. Laing, Bessie Brown (which was selected as the best bloom in the show), Duchess of Portland, Mrs. Sandford (a blush sport from Mrs. Laing), Horace Vernet, Comtesse de Ludre, &c. Messrs. Harkness and Son, Bedale, were third. Messrs. Dickson and Sons were also first with twenty-four varieties, having in fine character Her Majesty, Ulrich Brunner, Mildred Grant, Florence Pemberton (a large full pale Rose), Mrs. Donald McKee, Etienne Levet, &c. Messrs. Harkness and Co. were second; and Messrs. D. and W. Croll, Dundee, third. With twelve Teas and Noisette, Messrs. Dickson and Sons were again first. They had fine clean blooms of Madame Jules Gravereaux, Mrs. E. Mawley, White Maman Cochet, Comtesse de Nadaillac, &c. Messrs. D. and W. Croll were second; and Messrs. Harkness and Co. third. The best twelve Roses of any one variety were Mrs. W. J. Grant from Messrs. D. and W. Croll. Messrs. A. Dickson and Son were second; and Mr. J. Barrow, Leicester, third, each with Bessie Brown.

Carnations, white ground flakes and bizarres, also white ground Picotees, selfs, yellow grounds, and Fancies were all in good character. Messrs. Thomson and Co., nurserymen, Birmingham, taking some of the leading prizes. There were several classes for single blooms, both of Carnations and Picotees.

There were stove and greenhouse cut flowers in twelve bunches, the same number of hardy annuals, Zonal Pelargoniums, Fancy Pansies, and Violas were also well represented. Some fine collections of hardy herbaceous and bulbous flowers were staged, and there were classes for floral decorations, such as bouquets and baskets of flowers, sprays, buttonholes, &c. The crowd was so great in the tents that it was physically impossible to gather in full particulars. Roses were shown in several classes by gardeners and amateurs, the principal prizewinners in the large classes were the Rev. J. H. Pemberton, M. Whittle, and R. T. Hobbs. There were also classes for Carnations, Picotees, Pansies, &c., in all of which there was good competition.

There was less fruit than is usual at Leicester; but some very fine produce was staged, especially by Mr. J. H. Goodacre, Elvaston Castle Gardens. At the judges' luncheon, Mr. Owen Thomas spoke in the warmest words of approval of the fine quality of the Grapes—Muscat Hamburg and Madresfield Court in particular—shown by Mr. Goodacre. He was first in the eight dishes, Pine included, showing a good Queen, superb Muscat Hamburg, Muscat of Alexandria, and Black Hamburg Grapes, Noblesse and Chancellor Peaches, Elrue Nectarines, and Conqueror of Europe Melon. Mr. J. Read, The Gardens, Bretby Park, was second. In another class for eight dishes, Pine excluded, Mr. Goodacre was again first with Black Hamburg and Muscat of Alexandria Grapes, Royal George Peaches, Pineapple Nectarine, Kirke's Plum, fine Negro Largo Figs, a splendid dish of Clapp's Favourite Pear and Melon. Mr. J. Read was again second. Mr. Goodacre came in an easy first with a collection of four varieties of Grapes, he had Black Hamburg, Muscat of Alexandria, Mr. Pearson, and Madresfield Court. Mr. Goodacre also had the best two bunches of Black Hamburg; Mr. J. Thompson being second. He was also first with two bunches of Muscat of Alexandria; Mr. W. Duncan, Kegworth, being second with two bunches of any other black. Mr. Goodacre was first with superb examples of Muscat Hamburg. Mr. W. Duncan was first with two finely developed bunches of Buckland Sweetwater; Mr. Read was second with the same. Peaches and Nectarines in single dishes were sparingly represented, the best were Grosse Mignonne and Chancellor, the best Nectarines Lord Napier and Elrue. Plums were few, but very good, Kirke's, Jefferson, and Transparent Gage. There were no Pears, and but one dish of presentable Apples. In the Cherry class the Black Tartarian was very fine, and there were very good bush fruits, Gooseberries, with Red, White, and Black Currants; also very fine Tomatoes.



Vegetables in the open and gardeners' classes were very fine, the special prizes offered by Messrs. Sutton and Sons, Harrison and Sons, Yarde and Co., and others, brought very fine collections. Of all the vegetables, we were most pleased with those shown by cottagers living within a radius of four miles of the market place. They were not only numerous, but of very fine quality. So were their bouquets and baskets of garden and wild flowers, their Stocks and their striped and self Antirrhinums.

Many miscellaneous subjects were staged, and Gold Medals were awarded to Mr. W. Bentley, Leicester, for cut flowers; Amos Perry, South Tottenham, for hardy flowers and Water Lilies; Harrison and Sons, Leicester, for Capsicums and other plants and Sweet Peas; Gilbert and Son, Bourne, Lincs., for 100 bunches of Sweet Peas; Blackmore and Langdon, Bath, for a collection of single and double Begonias of exceptionally fine quality, and nearly a dozen Silver Medals were also awarded.

### Reading and District Mutual Improvement.

The annual outing of the above association was held recently, and notwithstanding the dull weather, a very enjoyable time was experienced. The members, who came from various parts of the district, including Mr. Leonard Sutton (president), Messrs. Townsend (Sandhurst Lodge), Rudd (hon. sec. of the Theale Gardeners' Association), Stroud (Burghfield), Green, Roberts (Woodly), Loader, Pontin, Davidson (Wokingham), Watts, Prior (Crowthorne), Barefoot (Mortimer), Martin (Sonning), Cox (Calcot), Ritchings (Wellington College), Herridge (Caversham), Wright, Lailey (Bucklebury), Lever (vice-chairman), Cox (hon. sec.), Fry, Macdonald, Judd, Lees, Soutter, Pembroke, Hinton, &c., met at Caversham Lock and travelled by the Mystery to Fenley, when by the kind permission of Mrs. Noble the beautiful gardens and grounds of Park Place were visited, the day being spent there. On arrival the party was received by Mr. G. Stanton, the head gardener (chairman of the association for 1902) and was joined here by Messrs. Gibson (Danesfield, Marlow), Hatton (Mill Hill), Powell (Park Place), Pigg, Priestly (Maidenhead) Hatton (Badgemore), &c. Proceeding through the dark arches an inspection was made of the outdoor gardens, where Roses and Sweet Peas were blooming profusely. Amongst the latter, of which 160 varieties are grown here, Countess of Lathom, Saidie Burpee, Emily Eekford, Black Knight, Brilliant, Her Majesty, New Countess, Salopian, Golden Gleam, Miss Willmott, Triumph, and Gorgeous were of exceptional merit, the flowers being large and of exquisite colours. Luncheon was then partaken of, and full justice having been done to the good things provided, the president, on behalf of the members, tendered their thanks to Mrs. Noble for her kindness in throwing open her charming grounds to them. Afterwards the company broke up into several parties, some going to the cricket ground to show their prowess with bat and ball, and others rambled through the vineries, stove, and greenhouses, not forgetting to inspect the collection of beautiful birds adjoining the residence. After tea the party wended their way to the boat, and reached Reading about nine o'clock, each one having thoroughly enjoyed the outing arranged for 1902.

### Shirley (Southampton) Gardeners'.

At a meeting of the above society, held recently at the Parish Room, Mr. J. Jones presided, and an excellent lecture was given by Mr. J. W. Mitchell, of The Gardens, Chilworth Manor, on "The Cultivation of Stone Fruit," a subject upon which he is able to speak with practical knowledge. He first spoke of the progress which the Peach and Nectarine had made in late years under glass cultivation. In choosing young trees to start with, avoid strong ones, because it is very rare you get any fruit on such. He preferred trees two or three years old, and which had been shifted twice. He favoured a border about 2ft in depth, with good drainage, and in width from 5ft to 8ft, according to the height of the wall. Do not use any manure in planting, but feed them afterwards. Disbudding is a most important operation, and it can only be learnt by practice. Mr. Mitchell also dealt with Plums and Cherries, strongly recommending the Victoria Plum for the cottager. A good discussion succeeded, in which Messrs. Jones, Wilcox, Miles, Verdon, and other members took part. Mr. Jones raised the question of the Waterloo Peach dropping its buds. It was suggested by Mr. Verdon that this might arise from the stock upon which it was grafted. The secretary (Mr. J. Miles) said that Waterloo was a favourite with himself, and that he gathered his first dish of ripe fruit on the 16th of July from a tree that had not had any protection whatsoever. There being some signs of incredulity as to this being the variety named, Mr. Miles said he bought it as such. He also said that he sent in his first dish of ripe Pears that morning. Mr. Mitchell said such forward growth was no doubt due to good cultivation and thorough shelter, obtained by high garden walls. A First Class Certificate of Merit was awarded to Mr. E. J. Wilcox for eighteen bunches of Sweet Peas, twelve spikes each. Mr. B. Ladhams had cut flowers; Mr. F. Snelgrove

had Hainburgh Grapes; and a vote of thanks was awarded to the hon. secretary (Mr. J. Miles, 222, Portwood Road) for a wasp nest with the live wasps taken off a bee hive, and how he removed it without being stung was a wonder to many. It formed one of the most interesting exhibits shown for a very long time.—J. M.

### Scottish Horticultural, August 5th.

The monthly meeting of this association was held in the society's rooms, 5, St. Andrew's Square, on the evening of the 5th inst., Mr. Comfort (president) in the chair. Ten new members were proposed for election. The paper of the evening was entitled, "A Supply of Vegetables All the Year Round," by Mr. Charles Blair, gardener, Preston, Linlithgow. In a very lucid and instructive paper of half an hour's length Mr. Blair, in a chronological manner, detailed his practice from January till December: when to sow, what to sow, and the best sort to sow. In dealing with Peas, Mr. Blair referred to the recent controversy between science and practice as to whether manure was efficacious or not, but gave it as his experience that heavily manured land produced a much larger crop, of better quality, than when grown on unmanured land. Referring to maggot in Onions, Mr. Blair recommended a mulching of short grass as a certain remedy. He strongly advised that Potatoes should not be manured if fine quality was wanted, but to sow on land which had grown Peas the previous season. Mr. Blair's paper was interesting all through, and was full of valuable hints to gardeners and amateurs. A most interesting discussion followed, and many valuable hints were given by the various speakers. Mr. Whyttock, Mr. Scarlett, Inveresk, Mr. Macintosh, Mr. Smale, and others took part in the discussion. Mr. McHattie, of the City Gardens, brought the discussion to a close by proposing a vote of thanks to Mr. Blair, which was heartily accorded.

The exhibits at the meeting were numerous and varied, and the table presented a most attractive appearance. The most attractive exhibit was six vases of Roses, from Mr. M. Todd, Musselburgh, of superb quality, and cut with long stems to show their habit. Nine blooms of Caroline Testout were superb. Others were Baroness Rothschild, Ulrich Brunner, Captain Hayward, Gustave Regis, Général Jacqueminot, Marie Baumann, &c. A cultural certificate was awarded. Messrs. Grieve and Sons, Red Braes Nurseries, staged a most attractive exhibit of Fancy Pansies and Violas, a new light yellow Viola, Canary, receiving a certificate of merit. Also a very rich crimson Dianthus named Coccinea. Mr. Comfort exhibited a very large truss of Hydrangea. A beautiful bloom of Eucalyptus filicifolia was shown by Mr. McMillan, Trinity Grove. The exhibitors were thanked for their productions.

It was agreed to hold next month's meeting on September 9, instead of the 2nd, being the evening before the autumn show in the Waverley Market. A vote of thanks was unanimously awarded to Mr. Wardrop, of Garvald, for his kindness in allowing a visit to his beautiful gardens and grounds on the occasion of their annual excursion. A vote of thanks to the chairman brought a most enjoyable meeting to a close.

### Young Gardeners' Domain.

#### *Kalanchoe flammea.*

This splendid new flowering plant, introduced from Somali-land in East Africa, deserves a place in every greenhouse. The brilliant colour of its inflorescences, and their durability, combined with a good habit in the plant itself, and its comparative ease of cultivation, ought to make it a great favourite. It grows about 18in high, is very useful for decorative purposes, and when better known will probably be largely grown. As the seed is very small, it must be sown lightly in pots or pans filled with sandy soil. Cover the pans with glass, and place them in a warm greenhouse. When the seedlings can be handled prick them out in boxes filled with sandy loam and return to the warm house. Pot the plants into "60's" (3in) as they require it, using the same soil, and encourage them to grow steadily. Before becoming root-bound, shift them into "48's" (5in), giving two parts loam, with one part of sand and mortar rubble mixed. Handsome plants may be grown in this size of pot if fed with a little fertiliser and well exposed to light. Each one should also have sufficient room to develop. Shade from the sun when the blooms open, and the flowers will last longer, and be of better colour than they otherwise would. I have not observed any insects upon this *Kalanchoe*, and probably they will not give much trouble in this respect.—M. FENN, Journeyman.

[The winter treatment of the plants in regard to watering them requires much care, as we find they sometimes damp or become rusty. *K. flammea* has been used as a bedding plant at Kew.]

# THE BEE-KEEPER.

## Purchasing and Moving Bees.

The best time to purchase bees is the spring or autumn. The advantages of a spring purchase are that there is no risk of loss during the winter, and in most cases by the end of the season they have repaid the initial outlay; in the autumn bees are, of course, less expensive. It is not advisable to buy stocks which are not in modern frame hives, as they are to a certain extent unmanageable, while transferring involves considerable trouble in addition to the risk of incurring disease. If swarms are desired, be careful to obtain them from an apiary free from disease, and from hives which swarmed the previous year, the queens will then be in their prime. Second swarms are generally weak, and consequently unprofitable. It is more satisfactory to purchase swarms by weight. There are between four and five thousand bees in a pound, and a good swarm consists of five pounds or seven quarts. Newly hived swarms should be removed in the evening of the same day that they issue, as they mark the location, and a subsequent removal means the loss of many bees. If the swarm is in a skep or box cover with open cloth and carry mouth downwards. It is now generally admitted that if purchased early enough, better results can be obtained from a nucleus which costs about the same as a swarm.

Stocks in bar-frame hives should be well packed before removal, which may take place when the temperature will not interfere with the stability of the combs. There is always an element of risk and some difficulty in packing stocks securely for a journey, but with care they should travel safely any distance. Jarring disturbs the bees, causing them to generate a high temperature, which increases the liability of a breakdown. April or September are by far the best and safest months. After the weather has prevented long flights they may be moved at any time when the distance is above half a mile. The effect of the excitement caused by moving in April is a beneficial stimulant. When disturbed earlier, the unnatural temperature caused is injurious.

Bees when excited fill themselves with honey, this occurs under confinement; when liberated they fly, and after many erratic movements, if the temperature is low, fall to the ground chilled and die. The results of such losses in the early part of the year cannot be estimated, as the brood in its different stages is entirely dependent upon the warmth being maintained. A week or two later makes all the difference, as the hatching of the young bees reduces this risk to a minimum.

The inexpert should remember that in all methods of transit the ends of the combs should face the direction in which they are going, so that if the combs are fitted with metal ends it is impossible for them to bump against each other and crush the bees between them. Before removing bar-frame hives it is necessary to place a piece of open sacking or cheese-cloth over the frames in lieu of the quilt, for ventilation, then fasten with screws a strip of wood 2in wide along the whole of the bar ends on each side of the body box. This, if properly done, will make the bars perfectly rigid. All the hive parts must then be fastened so that they cannot move. Nails are objectionable for the purpose, as they necessitate the use of a hammer to drive the nails, irritating the bees and probably breaking the combs. Old wired combs travel better than new ones. The closing of the entrance with a strip of perforated zinc completes the work of packing. Whether it is intended to travel by rail or road it is advisable to pad the bottom of the hive legs with straw to lessen the vibration. On arrival at destination, place them in the desired position and allow them to settle before releasing them. A day or two afterwards a careful examination should be made to ascertain whether the combs or queens have sustained any injury.

The precision and accuracy with which bees will find the exact position of their hive is remarkable. They follow their track unerringly guided by sensations of an unknown nature, among which sight plays a great part. In finding their way they are first guided by objects such as high chimneys and clumps of trees, until the accustomed surroundings are recognised, when they alight without hesitation on their stand. If the whole apiary was removed about 2ft or 3ft further away, and the relative positions retained, it would not inconvenience them. Therefore if we are not satisfied with the stand of one of the colonies and desire to move it a distance of less than half a mile, it should be allowed to remain until the bees are dormant before removal. After confinement during a cold spell they re-mark their position and naturally return to the new location. The position of a hive can only be altered in the summer months by moving it about 2ft each day, not counting those on which the bees do not fly, or removing them to the selected spot in the morning or evening when the bees are quiet, and placing a piece of board or some

unusual obstruction in front of the entrance so as to interfere with their flight; this to them being an inexplicable object is at once noticed and the position marked, thus enabling them to find their way back without difficulty.—E. E., Sandbach.



## Hardy Fruit Garden.

**FEEDING OUTDOOR PEACHES AND NECTARINES.**—It is only when carrying a crop that Peaches, Nectarines, and stone fruits generally, should, as a rule, receive any extra stimulating food, except, perhaps, when growth is of a somewhat weakly character, and would be improved by additional help. When bearing fruit, the demands of the trees for food and moisture are heavy, and if not properly supplied, undersized fruit and impaired quality are the result. Excess of food without fruit results in strong and sappy growth, which is never productive, owing to failure to ripen it sufficiently. A good manure for Peaches and Nectarines, as well as Vines, is Thomson's Vine and plant manure. To healthy trees with abundant roots spreading in moist soil, scatter the manure on the surface, 2oz to the square yard, and water it in, giving this at intervals of a week until the fruits begin to colour. As a change, watering with liquid manure, toned down to a safe strength, may be applied. When the surface of the border is fully exposed to the drying influence of sun and wind, with the additional heat which brick walls absorb, assisting in abstracting moisture, help for the roots will be derived if a mulching of a light character is applied, so that rapid evaporation may be prevented.

**OUTDOOR VINES.**—The growth must be kept well in hand, not allowing large quantities of superfluous shoots to extend and then shorten them wholesale. This gives a decided check to the trees which is not desirable. Maintain a little extension of growth beyond the bunches of fruit, according to the amount of space available. When stopping is required, do it when the shoots are soft. Extension growths, to be eventually used as fruiting canes, ought not to extend too long without a stopping, not more than 4ft or 5ft, even if free growth is permitted afterwards. The stopping helps to plump up the lower buds, and with plenty of room allowed the main leaves the canes will strengthen and ripen. Assist the bunches to swell with ample moisture, consisting of water and liquid manure, and protect the roots by mulching.

**BLACKBERRIES.**—Having secured an ample crop of fruit, afford every assistance to help its development. In the first place, suppress the whole of the weakly growth that bears no fruit. The strong and long canes which are being produced may be tied in, but in such manner that they are able to receive the ripening influences of light and air. This treatment will also give the fruit more exposure. Blackberries are gross feeders, and an ample mulching of rich manure must be supplied, on to which liquid manure from the farmyard can be freely poured from time to time.—EAST KENT.

## Fruit Forcing.

**CUCUMBERS.**—Where there is but one house it is usual to make a sowing in August for raising plants to place out early in September to yield a supply of fruit by December and onward through the winter. Where there is convenience, it is preferable to rely on the autumn fruiter for a supply up to, and over, Christmas, when plants from a sowing made at the beginning of September will be in good bearing, and continue the supply from the early parts of the year and through the spring months. One of the best Cucumbers for fruiting all through the year is a true stock of the old Telegraph, though there are many varieties that also possess a fine deep green colour, have shorter necks, are heavy—a point of some consequence when Cucumbers are sold by weight, and are of good quality. Every grower has a sort of his own which is appreciated; but there is very little difference in many Cucumbers of the Telegraph and Rochford types, except for sale, when they must be good in appearance and colour, straight, heavy, and crisp. The work of clearing out the house intended for the plants, the seeds of which have been, or are about to be sown, should be pushed forward, and attend to any repairs that may be necessary, or painting of the house, otherwise thoroughly cleanse the woodwork with carbolic soap and water, lime-wash the walls, or wash them with iron sulphate solution, made by placing 6½lb of iron sulphate in an old barrel, pouring on it ½ pint of sulphuric acid, and then adding by degrees 12½ gallons of water. Clear out the old soil and disinfect the beds



with the iron sulphate solution. If fermenting materials are used for bottom heat they must be well prepared, throwing the stable litter into a heap and turning over two or three times. This effectually works destruction on any animal micro-organisms present, and also on the resting spores of parasitic fungi.

**VINES: EARLY HOUSES.**—Though the Vines have the wood ripe and the buds plumped, with the older foliage falling, there must not be any attempt at removing adhering leaves, nor to cut the laterals in all at once, as that would probably cause the principal buds to start: therefore, remove the laterals by degrees, and shorten some of the long shoots, preserving, however, some growth, especially when the principal leaves are down, above the buds to which the Vines are to be pruned, the final pruning being deferred until the early part of next month. The old surface soil, top-dressing, or mulching, should be removed, forking any soil unoccupied by fibres from amongst the roots, taking the opportunity of raising any that are deep, and laying them in fresh material nearer the surface. Good calcareous or gritty loam (not too light) is the most suitable, with about a twentieth of wood ashes and a fortieth part of crushed half-inch bones. If the soil be light and gravelly, add a sixth of clayey marl, dried and pounded small; if heavy, supply about a sixth of gritty matter—calcareous or ferruginous gravel or freestone chippings; if deficient in calcareous material, add a sixth of old mortar rubbish to heavy soil, and chalk to light soil. Charcoal “nuts” is an excellent addition in any case to the extent of one-tenth. Give a moderate watering if dry, it sufficing that the compost be evenly moist, and the roots will push fresh rootlets, especially adventitious ones, from near the collar into the new soil, and be in capital condition for a start when the time comes round. If the Vines are in an unsatisfactory condition, the border should be examined, and this being faulty, either in composition or drainage, shade the house, lift the Vines, wrap the roots in wet mats, promptly remove the old soil and drainage, supplying clean and sweet in their place, relaying the roots in the fresh material with despatch. This will give the Vines a chance to form or make provision for pushing fresh roots, and so effect a good start; otherwise, lifting or renovating the border being deferred until the leaves are all down, the start is not nearly so satisfactory.

**MIDSEASON HOUSES.**—Vines generally have done well this season, especially as regards crop; but there has been an unusual prevalence of “spot” and a fair amount of “rust,” probably mainly due to the changeableness of the weather, and attention to the ventilation would counteract the prejudicial influences of its vicissitudes. There has also been more than the usual amount of shanking. Grapes, too, have been slow in acquiring colour; while some Vines have lost some foliage through the affection known as “browning.” Red spider also has been troublesome in places, for which there is no better remedy than syringing the leaves carefully with a weak solution of softsoap on the first appearance of the attack, and thinly coating the hot-water pipes with a cream formed of skim milk and flowers of sulphur. The free use of fertilisers has also great effect on red spider infested Vines, together with copious supplies of water. A surface mulching of rich, but not close, material, is of immense advantage to Vines in light soils and restricted borders, with supplies of liquid manure of a sustaining, rather than of a stimulating, nature are essential to a satisfactory result. Fire heat will be necessary where Grapes are ripening to secure a circulation of air, prevent the deposition of moisture on the berries, so avoiding “spot.” A temperature of 60deg at night is ample for Grapes when ripening, with 70deg to 75deg by day artificially, 5deg more being allowed for Muscats and other high temperature requiring varieties, allowing advances of 10deg to 15deg from sun heat. When the Vines are carrying heavy crops, the temperature should be kept rather low at night, so as to give time and rest to Vines in order to perfect them.

**LATE HOUSES.**—After the Grapes commence ripening, full supplies of water are necessary until they are well advanced in colour, as most late varieties take a long time to perfect thoroughly. All late Grapes require time, and when commencing to colour they require a free circulation of warm, rather dry air on favourable occasions, and a little constant ventilation, and then with due supplies of food and moisture they attain a fulness of berry and a perfection of finish, other conditions being favourable. Indeed, poverty of finish is the chief cause of shrivelled Muscats and others shrinking after they have hung some time. Afford a temperature of 70deg to 75deg by day, 80deg to 90deg with sun, and close sufficiently early to increase to 90deg or 95deg. When the sun is losing power, put on enough top and bottom and side air to ensure a circulation, allow the temperature to gradually cool, which rests the Vines, and increase the ventilation early with the advancing temperature. The hot-water pipes should, if necessary, have a little warmth in them to prevent the temperature falling below 65deg at night, for parsimony in this respect is often costly, as having to apply fire heat late in the season is more expensive, and the result unsatisfactory.—**ST. ALBANS.**



\* \* All correspondence relating to editorial matters should be directed to “THE EDITOR,” 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

### Plan of a Bothy—Competition.

“Well-wisher” promises a first prize of £3, and the Editor supplies a second prize of £1.

The rules of the competition are as follows:—The plan, drawn to scale, must not exceed 7in broad by 7in deep, and must be clearly defined on stout paper. The plan must provide suitable accommodation for six men, and the cost of the building ought not to exceed £200 to £220. A statement of the general items of cost should accompany the plans, together with any written comments thereon. The competition is open until Christmas, 1902, by which date all plans must be in the hands of the Editor. The sender's name and full address should be enclosed when sending the plan, and the sender will alone be held responsible for it.

### CUCUMBER LEAVES AND FRUIT DISEASED (W. D. R.).

—The specimens are infested by the comparatively recently determined Hole-and-Spot fungus, *Cercospora melonis*, which on the leaves produces numerous pale spots, the tissue shrinking and dying away, leaving holes of varied sizes. Sometimes, however, it destroys the whole leaves, and that suddenly, they appearing all right in the morning, and under an outburst of sunshine collapsing in a few hours. It also attacks the fruit, causing large spots, and decay speedily ensues. The fungus is most prevalent during spells of cold, dull, and moist weather, and is certainly favoured by the extremely close and water-saturated atmospheric conditions under which Cucumbers are grown for marketing. The only real preventive is more air, less nitrogenous feeding—in short, more rational conditions of cultivation. The plants may be sprayed with a solution of permanganate of potassium, 1oz of the crystals in 3 or 4 gals of water, and every part of the house should also be coated with the finest possible film of the solution. It will, however, discolour white paint, still, we do not know of anything more suitable for application to Cucumber foliage and fruit. The surface of the bed should also be saturated with the solution. All affected leaves and fruits should be removed and burnt. Ventilate, and the fungus will make very little out, even in dull weather securing a change of air daily, not allowing moisture to condense on the foliage for lack of air.

**LEAVES OF APPLES AND PEARS (L. B.).**—The Apple tree leaves are infested by the Apple scab fungus, *Fusicladium dendriticum*, which first attacks the young leaves and shoots, small, roundish, dark spots appearing, mostly on the upper surface. These spots soon increase in size, and run into each other, forming large, irregularly shaped blackish blotches, and when conditions are favourable for the growth of the parasite the leaves are frequently killed while quite young; always crippled. On the fruit the fungus produces the well-known scab. The preventive treatment is to spray the trees with ammoniacal carbonate of copper solution, made by mixing 1oz of carbonate of copper and 5oz of carbonate of ammonia, and dissolving it in about a quart of hot water, and when thoroughly dissolved, add 16 gals of cold water. Spray, first, just as the flower buds begin to open; second, when the petals of the flowers are falling; and third, when the fruit is the size of peas or slightly larger. If the season be rainy a fourth treatment should be given twelve days after the third. If Bordeaux mixture be used it must be in dilute form, or the foliage will be injured. Spraying now would arrest disease, but the proper course is to prevent it. The Pear leaves are infested by the Pear leaf gall mite, *Phytoptus pyri*, which gives rise to the reddish spots on the leaves, they ultimately becoming brown or black. The mites live during the winter in the scales of the buds, and the best preventive treatment is to thoroughly spray the trees while dormant with paraffin emulsion, this being made by dissolving 1 quart of softsoap in 2 quarts of boiling soft water. Remove from the fire, and while still boiling hot add one pint of paraffin oil and immediately churn the mixture with a small hand syringe. In five minutes a perfect emulsion will be obtained, and this, diluted with ten times its volume of water, is fit for use. If the trees are now sprayed with a solution of the paraffin emulsion, 8oz to 3 gals of water, adding ½oz sulphide of potassium, and well wetting the under side of the leaves, it will keep the mites in check.

**FRUITS, NUTS, AND VEGETABLES (E. C.).**—The author is Mr. A. Broadbent, Secretary of the Vegetarian Society, 19, Oxford Street, Manchester.

**MUSHROOMS (E. J. K.).**—By "make" we presume you intend grow Mushrooms. In this case you should procure manure from stables in which carriage horses are kept, collected and kept free from the litter in a covered shed open at the front, and there turning to prevent overheating and to allow of the escape of rank steam. When enough is collected to make a bed of the desired size, the manure should be made up into a bed, not less than 12 in in depth, well beaten or trodden down to render it firm, preferably rammed down hard with a brick or hand rammer. In the course of a week the bed will have heated, and when it is on the decline, or not likely to heat more highly, it should be spawned, the temperature being 90 deg. not more, at 2 in beneath the surface. Small pieces of spawn, 1 in to 2 in square, should be inserted in holes made with a trowel 4 in apart and 2 in deep, the manure so removed being used for covering it over. In about a week afterwards, or sometimes earlier, 1 in to 2 in of moist, rather heavy loam should be laid all over the surface and beaten hard with the back of a spade. The tiny Mushrooms seldom appear in less than four or five weeks from spawning, and the time during which the beds remain productive afterwards varies very considerably. When about half grown they are termed "buttons" and the full-grown "broilers." Water may be required, but it must not be given too frequently, and, indeed, watering should be avoided as much as possible, yet water must be supplied to keep the surface sufficiently moist. Any dark place is suitable for making the bed, provided it is frostproof; if not, a covering of straw must be used.

**NAMES OF PLANTS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. D.).—1, *Spiraea filipendula*; 2, *Verbascum nigrum*; 3, *Deutzia crenata* fl.-pl. (Crofter).—1, *Lycopodium alpinum*; 2, *Polystichum angulare*. (F. R. N.).—1, *Lycostera formosa*; 2, *Lælia elegans*. (G. M.).—*Magnolia tripetala*. (T. S.).—*Habenaria bifolia*.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.            | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|                  |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                  |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.            |                    |                         |           |           |           |             |                                       |                |                |                              |
| July and August. |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ...27     | S.W.               | deg. 60.4               | deg. 57.5 | deg. 64.0 | deg. 53.3 | Ins. 0.05   | deg. 62.5                             | deg. 60.1      | deg. 57.2      | deg. 53.3                    |
| Monday ...28     | W.S.W.             | 62.2                    | 55.0      | 68.2      | 58.0      | —           | 60.7                                  | 60.0           | 57.2           | 48.5                         |
| Tuesday ...29    | W.S.W.             | 61.2                    | 56.8      | 69.2      | 50.3      | —           | 61.0                                  | 59.9           | 57.2           | 42.2                         |
| Wednesday 30     | W.S.W.             | 63.7                    | 57.0      | 66.7      | 49.0      | 0.05        | 62.0                                  | 60.0           | 57.2           | 38.7                         |
| Thursday 31      | W.N.W.             | 59.4                    | 54.7      | 66.2      | 52.3      | —           | 61.3                                  | 60.0           | 57.3           | 50.2                         |
| Friday ... 1     | N.E.               | 54.6                    | 52.6      | 63.9      | 52.3      | —           | 60.5                                  | 60.0           | 57.5           | 43.2                         |
| Saturday 2       | S.W.               | 58.9                    | 54.0      | 68.2      | 43.2      | 0.11        | 59.0                                  | 59.5           | 57.5           | 35.9                         |
| MEANS ...        |                    | 60.1                    | 55.4      | 66.6      | 51.9      | Total. 0.22 | 61.0                                  | 59.9           | 57.3           | 44.7                         |

The weather of the past week was rather dull, with intervals of bright sunshine. The wind has been rough and very cold for the time of year.

### Publications Received.

"Meehan's Monthly" (July) contains a coloured plate of *Erigeron philadelphicus*. \* \* "Sunset" (June) containing the concluding articles on Luther Burbank's work. \* \* "Garden Cities of To-morrow," by Ebenezer Howard. London: Swan, Sonnenschein and Co. (Ltd.), 1s. \* \* "Le Jardin" (July 20), coloured plate of *Gladioli*. \* \* "Russia," an illustrated journal of industry, commerce, literature, art, &c. \* \* "Twenty-Seventh Annual Report of the Board of Commissioners of the City of Boston Department of Parks," for July 31, 1902. \* \* "Cassell's Dictionary of Gardening," Part 15, with coloured plate of *Hippeastrums*. Ends at *Prunus*. \* \* "Garten Flora" (July, 1902). Coloured plate of *Byblis gigantea*, Lindl. \* \* "The Tropical Horticulturist" (June 2).

## Book Notices.

### Garden and Grounds: How to Lay out and Arrange.<sup>1</sup>

The author of this book, which comes to us in green paper covers, is Mr. T. W. Sanders, whose name is now familiar to most gardeners. The treatise admirably fulfils the title, and beyond the concise and clear instruction imparted, there are very helpful plans, suitable for designing gardens and grounds of a quarter of an acre up to so many as ten acres. The work of laying out is described, and selections of shrubs, plants, &c., are furnished. (36 pp., 6½ by 7. Price 7d. net.)

### Covent Garden Market.—August 6th.

#### Average Wholesale Prices.—Fruit.

|                           | s. d. | s. d.   |      | s. d.                   | s. d.        |
|---------------------------|-------|---------|------|-------------------------|--------------|
| Apples, Tasmanian ...     | 11    | 0 to 15 | 0    | Lemons, Messina, case   | 12 0 to 20 0 |
| Bananas ...               | 8     | 0       | 12 0 | " Naples "              | 25 0 0 0     |
| Cherries, English,        |       |         |      | Melons, each ...        | 1 6 2 0      |
| ½-sieve ...               | 8     | 0       | 12 0 | Neectarines, doz. ...   | 3 0 12 0     |
| Currants, red, ½-sieve    | 5     | 0       | 6 0  | Oranges, case ...       | 12 0 16 0    |
| " black, "                | 9     | 0       | 10 0 | Peaches, doz. ...       | 3 0 12 0     |
| Figs, green, doz. ...     | 2     | 0       | 4 0  | Pines, St. Michael's,   |              |
| Gooseberries, ½-sieve ... | 4     | 0       | 5 0  | each ...                | 2 6 5 0      |
| Grapes, Hamburgh, lb.     | 0     | 9       | 1 6  | Plums, Orleans, ½-sieve | 8 0 9 0      |
| " Muscat ...              | 2     | 0       | 3 0  | Raspberries, peck ...   | 3 0 4 0      |
| Greengages, ½-sieve ...   | 8     | 0       | 9 0  | " lb. pnts., doz.       | 3 0 4 0      |

#### Average Wholesale Prices.—Vegetables.

|                         | s. d. | s. d.  |     | s. d.                    | s. d.      |
|-------------------------|-------|--------|-----|--------------------------|------------|
| Artichokes, green, doz. | 2     | 0 to 3 | 0   | Lettuce, Cabbage, doz.   | 0 6 to 0 0 |
| " Jerusalem, sieve      | 1     | 6      | 0 0 | " Cos, doz. ...          | 0 9 1 0    |
| Batavia, doz. ...       | 2     | 0      | 0 0 | Marrows, doz. ...        | 3 0 0 0    |
| Beans, French, lb. ...  | 0     | 7      | 0 9 | Mint, doz. bun. ...      | 4 0 0 0    |
| " broad ...             | 3     | 0      | 4 0 | Mushrooms, forced, lb.   | 0 8 0 9    |
| Beet, red, doz. ...     | 0     | 6      | 0 0 | Mustard & Cress, pmt.    | 0 2 0 0    |
| Cabbages, tally ...     | 5     | 0      | 0 0 | Parsley, doz. bnchs. ... | 3 0 0 0    |
| Carrots, new, bun. ...  | 0     | 2      | 0 3 | Peas, blue, bushel ...   | 3 0 4 0    |
| Cauliflowers, doz. ...  | 3     | 0      | 0 0 | Potatoes, English,       |            |
| Corn Salad, strike ...  | 1     | 0      | 1 3 | new, cwt. ...            | 6 0 7 0    |
| Cucumbers, doz. ...     | 2     | 6      | 4 0 | Radishes, doz. ...       | 1 0 0 0    |
| Endive, doz. ...        | 1     | 6      | 0 0 | Spinach, bush. ...       | 2 0 3 0    |
| Herbs, bunch ...        | 0     | 2      | 0 0 | Tomatoes, English, lb.   | 0 4 0 5    |
| Horseradish, bunch ...  | 2     | 6      | 0 0 | " Jersey ...             | 0 4½ 0 5   |
| Leeks, bunch ...        | 0     | 1½     | 0 2 | Turnips, bnch. ...       | 0 2 0 3    |

#### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                           | s. d. | s. d.   |      | s. d.                      | s. d.      |
|---------------------------|-------|---------|------|----------------------------|------------|
| Aralias, doz. ...         | 5     | 0 to 12 | 0    | Fuchsias ...               | 4 0 to 0 0 |
| Araucaria, doz. ...       | 12    | 0       | 30 0 | Grevilleas, 48's, doz. ... | 5 0 0 0    |
| Aspidistra, doz. ...      | 18    | 0       | 36 0 | Hydrangea, pink ...        | 10 0 12 0  |
| Crotons, doz. ...         | 18    | 0       | 30 0 | Lycopodiums, doz. ...      | 3 0 0 0    |
| Cyperus alternifolius     |       |         |      | Marguerite Daisy, doz.     | 4 0 6 0    |
| doz. ...                  | 4     | 0       | 5 0  | Mignonette ...             | 6 0 0 0    |
| Dracæna, var., doz. ...   | 12    | 0       | 30 0 | Myrtles, doz. ...          | 6 0 9 6    |
| " viridis, doz. ...       | 9     | 0       | 18 0 | Palms, in var., doz. ...   | 15 0 30 0  |
| Ferns, var., doz. ...     | 4     | 0       | 18 0 | " specimens ...            | 21 0 63 0  |
| " small, 100 ...          | 10    | 0       | 16 0 | Pandanus Veitchi, 48's,    |            |
| Ficus elastica, doz. ...  | 9     | 0       | 12 0 | doz. ...                   | 24 0 30 0  |
| Foliage plants, var, each | 1     | 0       | 5 0  | Shrubs, in pots ...        | 4 0 6 0    |

#### Average Wholesale Prices.—Cut Flowers

|                           | s. d. | s. d.  |      | s. d.                    | s. d.        |
|---------------------------|-------|--------|------|--------------------------|--------------|
| Arums, doz. ...           | 3     | 0 to 0 | 0    | Lily of Valley, 12 bnchs | 12 0 to 18 0 |
| Asparagus, Fern, bnch.    | 1     | 0      | 2 0  | Maidenhair Fern, doz.    |              |
| Bouvardia, coloured,      |       |        |      | bnchs. ...               | 4 0 5 0      |
| doz. bunches ...          | 6     | 0      | 8 0  | Marguerites, white,      |              |
| Carnations, 12 blooms     | 0     | 6      | 1 0  | doz. bnchs. ...          | 4 0 0 0      |
| Cattleyas, doz. ...       | 12    | 0      | 15 0 | " yellow, doz. bnchs.    | 2 0 0 0      |
| Cornflower, doz. bun.     | 1     | 0      | 1 6  | Myrtle, English, per     |              |
| Croton foliage, bun. ...  | 0     | 9      | 1 0  | bunch ...                | 0 6 0 0      |
| Cycas leaves, each ...    | 0     | 9      | 1 6  | Odontoglossums ...       | 4 0 0 0      |
| Cypripediums, doz. ...    | 2     | 0      | 3 0  | Orange blossom, bunch    | 2 0 0 0      |
| Eucharis, doz. ...        | 2     | 0      | 3 0  | Roses, Niphetos, white,  |              |
| Gardenias, doz. ...       | 2     | 0      | 2 6  | doz. ...                 | 1 0 2 0      |
| Geranium, scarlet, doz.   |       |        |      | " pink, doz. ...         | 2 0 0 0      |
| bnchs. ...                | 4     | 0      | 0 0  | " yellow, doz. (Perles)  | 1 0 2 0      |
| Gladiolus, white, doz.    |       |        |      | " Generals ...           | 0 5 0 6      |
| bunches ...               | 6     | 0      | 0 0  | Smilax, bunch ...        | 2 6 3 0      |
| Gypsophila, doz. bun.     | 3     | 0      | 0 0  | Stephanotis, doz. pips   | 2 0 0 0      |
| Ivy leaves, doz. bun. ... | 1     | 6      | 0 0  | Stock, double, white,    |              |
| Lilium Harris ...         | 2     | 0      | 3 0  | doz. bun. ...            | 2 0 3 0      |
| lanefolium alb.           | 1     | 0      | 1 6  | Sweet Peas, white and    |              |
| " l. rubrum ...           | 1     | 0      | 1 6  | coloured, dozen bun.     | 1 0 2 0      |
| " longiflorum ...         | 2     | 0      | 3 0  | Tuberose, dozen ...      | 0 3 0 4      |

<sup>1</sup> "Garden and Grounds: How to Lay Out and Arrange." No. 2 of "The Country House Series of Handbooks." Dawber & Ward, Ltd., 6, Farringdon Avenue, London.





## Young Judges and Their Training.

Of course it is very self-evident why judges and their labours are much in our mind just at present. We have shows on every side, and are deluged with schedules and prize lists. Every little community thinks it must have an exhibition of some sort and of something; they get the entries and they choose the judges. Well, there is a little difficulty here sometimes. It will not do to have a local man; it will not do to have, or rather to ask, too great a man, for indeed the best men are always spoken for months beforehand. The secretaries of shows could give lists of those men capable and willing to act. It does not do to have a man too young, the public doubt his judgment; nor does it do to have a man too old, he gets out of the fashion, and is often full of prejudice. The supply has to be kept up, and the rising men need to be educated to the profession as it were. Shall we say a thorough knowledge of stock comes first, and we shall not make a mistake if we put a good temper second, a clear head that will arrive at a decision quickly and not be turned from the point by adverse criticism. There are many good men very short metttled, and apt to be a little dictatorial with their colleagues. They are very trying, hence the need for good temper. "A soft answer"—we know the rest. There is also another saying about "Second thoughts being best"; we are not quite sure that this applies to judging. With ourselves, first impressions are oftenest the most correct. We come into the ring unprejudiced, or at least we try to do so, and unless we find on closer examination there is some unsoundness, or in horses want of manners, we generally go back to our first love.

Of course, in judging a hunter or hack class, it is impossible to really assess a horse's good qualities until we have had our leg across him. If he only goes well with his accustomed rider it is not enough; we wish to see how he will acquit himself with a stranger—that is the test. The object of his being at the show is his possible sale in the near future, and his value depends materially on his manners and good carriage, that is, of course, after his form and shape are considered to be right. There are a few judges who have the power of carrying all before them, that is, no one ever dreams of dissenting from their opinion, and their fellow-judges, the exhibitor, and the public generally, are fully satisfied with all their awards.

We generally find that the cultivation of specialities is carried down from father to son. The old herds, the old breeds, the old studs, and in cases of this sort the son is "at school" from his earliest youth. He hears the qualities of pedigree, form, and quality continually discussed. He knows *which* are considered the pick of the stock, *which* find a ready sale. He compares the home produce with what he sees at shows, and if he loves his profession, and has decent abilities, by the time he has reached maturity he ought to be a good judge without any special making. He ought to assume before his elders a modest demeanour (whether he feels it or not), and he should be able, clearly and concisely, to give the reasons that influence his decisions. It is no use saying "That roan heifer is a better beast than the red and white," and have no other reason to give than "I say so," or "Father thinks so." It is not necessary or desirable that the public should know every point by which the judge arrives at his final award, but he should be able to tabulate it all to himself if need be.

Those who read the horticultural part of this paper are quite familiar with the system of judging by points, and a fairer one cannot exist, and if the public would be at the pains of going rather more into detail than is their habit, we should hear less of ill-considered objection to and adverse criticism of the judges. Let discontented horticultural exhibitors take this to heart as well as farmers. It is ignorant, self-opinionated people who are always the worst to deal with, and if they would just allow themselves to

consider the pros and cons, they would not fall into the error of condemning the judges unheard.

We have just come across a good "notion," to use a Yankee expression. The "notion" did originate on the other side the water, and has been adopted with good results by the instructors of agricultural youth at Wye, Kent. These lads may not all have had the advantage of fathers whose whole and sole aim was to produce, say, A1 Shorthorns, and consequently they need what may be termed an A B C guide to the art of judging. We think the plan might well be extended beyond the college precincts. The young beginner is given a card thus arranged:—The animal taken is a perfect cow of the Shorthorn breed; her good points are described clearly and briefly, and a maximum number of marks assigned to each amounting in the aggregate to 100. There is a column for marks which give the pupil's estimate, and there is also a column for the instructor to place his record. Doubtless at first the two columns will not agree, but the lad will find out where his estimate and that of the professor differs. It is really an object lesson of most practical value, and reduces the art of judging to an exact science. These cards act as sort of "leading strings," and, as the judgment matures, can, of course, be altogether done away with. We notice the highest number of marks for any particular feature obtainable by a good cow is twenty for the udder. She can also earn two sets of ten, one set for form and quality, and another ten for temperament and colour.

The card before us mentions one or two undesirable points which would materially spoil the total of marks did they exist in the animal before the judges. We should think it highly probable that this card system will be extended till it embraces all classes of stock on the farm. Competent men would soon arrange a set, and we believe they would be found of great service to other than the young pupils or students at the agricultural college. We believe in Shropshire the young farmers have competitions of this nature. Their knowledge is increased, and their wits sharpened.

"Punch" is again on our track. The never-satisfied-farmer joke is a very old one, and although we are tired of it, it goes to prove what we believe to be strictly true, that the average of the hay crop is very high and the quality first-rate. For the last few years there has been great "shortage" both in hay and straw; this year we look for bumper crops, and it is only the farmer whose stock has been on short commons, and whose fold-yards have been absolutely denuded of bedding, can tell the relief and comfort there is in a full stackyard. We will hazard no opinion about the yield of corn, that is always an unknown quantity; but we can see and fully appreciate the wealth of straw that promises great things in every field.

## Work on the Home Farm.

Heavy rain, far more than is expressed by the word shower, has fallen almost daily; it has suited the root crops exactly, especially Potatoes, which can never have too much surface moisture in July. Swedes present such an appearance as no living farmer can remember, and if this does not prove a record year for roots we are much deceived. The rain has laid some of the cornfields, but not so extensively as we anticipated, which may mean that the crops were not so heavy as they appeared; the real fact we apprehend to be that the straw, though long, is fairly sturdy, and being very thick on the ground is not readily storm broken.

Little hay is left out about here; but a visit to a neighbouring county last week revealed not only much hay, but some Clover still in the fields. On inquiry, we found that spring keeping had been so scarce, and the mowing Clover and meadows had been grazed so far into the month of May that the hay crop was necessarily a late one. These late crops are good, and far heavier than those laid in earlier and now safely in stack; but they are still in the fields, and their ultimate value very problematical. It is the old story—"You cannot eat your cake and have it." In this case there may be two cakes, but the second, though big, may be very tasteless.

The showery weather is delaying the corn harvest, which will hardly commence before August 20. Wheat is well set in the ear, there being few deficient grains. Barley, too, is well set; but we are sorry to find a large number of dead, or dying, heads in some fields. We have carefully examined a number of stems, and have found no direct evidence of its presence, but we think that the Hessian fly is really responsible for the death of some portion of the plants. This insect attack appears likely to discount what might have been a record crop.

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## Journal of Horticulture.

THURSDAY, AUGUST 14, 1902.

## Garden Fruits in Warwickshire.



HE present time seems a very apposite one, not only for summing up and chronicling results to date, but for gauging the practically assured autumnal crops, or, rather, what there are of them, some being, I fear, conspicuous only by their absence. *Tout passe, tout passe, tout casse*, as the French saying is—nothing indeed endures, everything is ever in a transition stage, increasing at its zenith for a tiny span, and finally decreasing. We have reached a period, taking England generally, betwixt and between, as it were, the summer and the autumn. That bugbear the weather is, unfortunately, of the very essence of the whole business, and it may be a wholesome thing to get rid of one's inevitable grumble at this early stage in these notes.

The English summer is credited by a wag with beginning the 31st of July and ending the 1st of August. Probably, anyhow for low temperatures generally, this season is a record. Even in the last lap of July, morning after morning, the quicksilver on the wall has refused to start affairs higher than 52deg to 56deg Centigrade, with a preceding night temperature no doubt considerably less; *par consequent*, the ungenial conditions all through the germinating and growing time have borne a good deal of, figuratively, bitter fruit, which may be taken to mean, in fact, no fruit at all in many cases.

Whether or no Royal Warwickshire may be taken as a type I know not; but, speaking from our coign of vantage in what is almost to a mile generally reckoned as the exact centre of England, the writer ventures to give the following points. Generally speaking, all fruit against walls not only set, but so far has matured very well. Thus Apricots, Plums,

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and Pears in our walled garden promise excellently. Out in the open the case is lamentably different. To begin with, the modest, but, beyond all fruit at that stage, useful, little green Gooseberry. Whereas we are usually almost crowded out, so prolific is the supply, this time the crop is a very sparse one. The Strawberry, which Dr. Boteler in his quaint language shrewdly pronounced as the best fruit of any, has, on the other hand, proved eminently satisfactory. Fine big berries, owing to the abundant rains, were produced, and ran their race in first rate fashion. The same tale throughout the genus, whether Royal Sovereign, Dr. Hogg, Veitch's Perfection, or the truly superbly flavoured White Pine, a Strawberry deserving to be much better known and more widely grown than at present; at any rate, in private gardens, making, as it does, so elegant a dish for dessert when contrasted with its fellow sister the red. I have for some years pursued a rather novel course as to the arrangement of the fruit now under mention. Along my entire borders, whether main or cross paths, there are to be found my Strawberries. It has the preference over the customary box for its beauty when in flower in the spring, and its utility and the extreme facility with which it is gathered in its later stages.

As to Raspberries, whether a local trait or not, this berry's condition is peculiar this year. The fruit does not readily part from its kernel; otherwise the crop, but for a superabundance of the bird tribe more than usually in evidence just now, might be pronounced a normal one. Alas! too, my modest modicum of Cherries have all been a prey to the devouring little bipeds, this impudent crew looking upon the luscious product as their natural perquisite. And in this connection I must enlarge my doleful note to record the dire havoc these intruders committed in anticipation so long ago as last autumn. Just before the winter of their discontent set in, I discovered to my chagrin all the plump young buds of our excellent three-year-old Currant bushes—Red, White, and Champagne—had been entirely stripped from the branches and shoots. The Black Currant, being apparently too harsh, they leave religiously alone; neither till very hard up do they attack these when in fruit, though I think those incorrigible offenders the blackbirds have a go at them for a change even while the ruby kind is still on. When one comes to think of it, the summer menu of the birds about a choice garden is a pretty fair one, and I suppose there are a good many epicures among them as in the human race.

But to pass on. "The promise of May" as regards Apples, Pears, and Plums was bridal and bountiful in the extreme. Alike in garden and orchard, the place was a feathery bower of bloom, reminding one of that enchanting prospect the Ueno Park in distant merry Tokio. But alas! how contrary the result in these different locale. The one was taken and the other left! In plain words, except where grown against the wall (and I certainly have no fault to find with my splendid show of Jargonelles) the Pear has almost entirely failed, the accommodating little pyramids being almost fruitless, while the Apple is but one degree better. Against this, however, in the latter position, viz., the orchard, the Apple crop has set and matured to a really fine crop, and looks at the present juncture remarkably clean and healthy, a grand spread indeed being borne by Early Margaret, Codlin, Wyken Pippin (so popular in this part of the Midlands, and raised originally in, and called after, our adjoining village), Northern Greening, and Royal Russet, while those grand fruits Beauty of Kent and Warner's King are no whit behind in size and quantity; besides which, the Ribston, Eve's Pippin, Foster's Seedling, Queen Caroline, and Shropshire Wonder all should weigh in a good many bushel credit to the tree. The only kinds not doing themselves full justice, so far as I am concerned, are Winter Queening, which had, however, a bumper crop last year; Besspool, and Blenheim Orange. This last, however, is an old, or, rather, young offender. To be more explicit, it is taking the full share of its customary slowness in coming into proper bearing, for, judging by its age, it is no chicken, full twelve to fifteen summer suns and winter rains having nourished its growths. Talking of the Apple, why, I wonder, did the ultra inquisitive lady select this particular kind when she asked a leading divine quite *au sérieux* whether the Apple that Eve ate was a Ribston or a Blenheim Orange! Alas! that the good old Ribston is practically a thing of the past. Taking Plums next, exactly the same remark applies as to the Pear. Against the wall they are excellent, out in the open practically nil, though the blossom was superb. The

prolonged low temperature and continuous night frosts, I suppose, plied their deadly work all too surely.

I may conclude this brief epitome with a word on the Walnut. Such a crop as we had the luck to harvest in *l'année passée* I never remember before, nor even dare expect to see again. Our trees are remarkably fine spreading, full-sized park ones; still the bushels and bushels obtained last fall were simply amazing, consequently I must be lenient in criticising their offspring this year; and it is no surprise to find but a meagre promise of the nut which in old-fashioned times hobnobbed so well on the mahogany with the good old crusted port of the delicious fruity flavour we so seldom taste nowadays. Possessing as I do two different kinds, the huge double borenut and the common normal shaped and sized one, the trees this season seem to have accommodated themselves pretty well to circumstances, for while the former, exhausted by their excess of a year ago, are about to yield not much more than a pittance, the latter and smaller sort has risen to the occasion very well, and again bears a really capital array. My little nuttery, moreover, situate in an island all to itself, is, perhaps partly owing to a good clearing out given it at winter time, well in evidence with something more than a mere sprinkling.—J. A. CARNEGIE-CHEALES.

## The Cheddar Pink at Home.

The pretty native Dianthus or Cheddar Pink, the Cliff Pink, as the Cheddar folks term it, is very lovely just now, on the famous cliff from which it takes its name, and a ride of about twenty-five miles was well repaid by a sight of it in full beauty this week. There is little fear of this charming plant becoming extinct, notwithstanding the hundreds of plants that are yearly torn up by trippers from Bristol, and to their shame be it said by the natives of the locality themselves, for though all within reach, or nearly all, have disappeared, there are numbers of immense masses of it, hundreds of feet up on these wonderful cliffs, quite out of everybody's reach. Seeds from these, of course, drop and are blown to lower elevations, and there are always a few flowers to be picked, but its stronghold higher up is safe enough, and the flower hawkers who deplete our hedgerows of the beautiful Ferns, Primroses, and other native plants are too careful of their skin to attempt an attack on them.

To those who are not acquainted with it the Cheddar Pink is very similar in habit to the common garden Pink, but smaller; the flowers occur usually on single flowered stems, are about 1½ in across, of a very delicate rosy pink in colour, and deliciously fragrant. Seeds collected in late summer and sown on old walls or rockeries germinate freely, and form very beautiful clumps that in June and early July are covered with flowers. This is a far more satisfactory way of establishing it than the usual method of tearing up the plants when in flower, carrying them about in the heat, and eventually planting them, only to perish miserably.

Besides the Pink there are many other beautiful native plants that grow very freely in this locality. The graceful Meadow Rue or *Thalictrum* is very freely represented, its Fern-like foliage and tall graceful spikes of flowers being very charming. Probably its inconspicuous colouring is its salvation, for it abounds on every hand quite within the reach of all. Ferns are not particularly plentiful, except a few common sorts, but higher up the gorge, growing in the cool soil beneath shoals of loose stones, is a quantity of the deciduous Lady Fern in variety. *Ceterach officinale*, and *Asplenium adiantum nigrum*, and the *Trichomanes* are everywhere, while growing among the stones is a bright golden yellow Poppy, as bright as the golden *Eschscholtzia* and as showy. In growth it is very similar to *P. Rhæas*, of which it is probably a variety. (Does any reader know of a golden yellow form growing wild?) I could not get seeds, as the earliest flower had only just fallen, and most of them were in full beauty, but I hope to later on. The Red Valerian was in full flower, but the pretty Harebells, Toad Flax, and others are not yet. Great masses of Sun Rose were a blaze of yellow in various places, and many other wild flowers of equal beauty, so that a visit to this neighbourhood, leaving out altogether the marvellous stalactite caves for which it is so justly famous, is full of interest to the lover of our native flora.—H. R. RICHARDS.

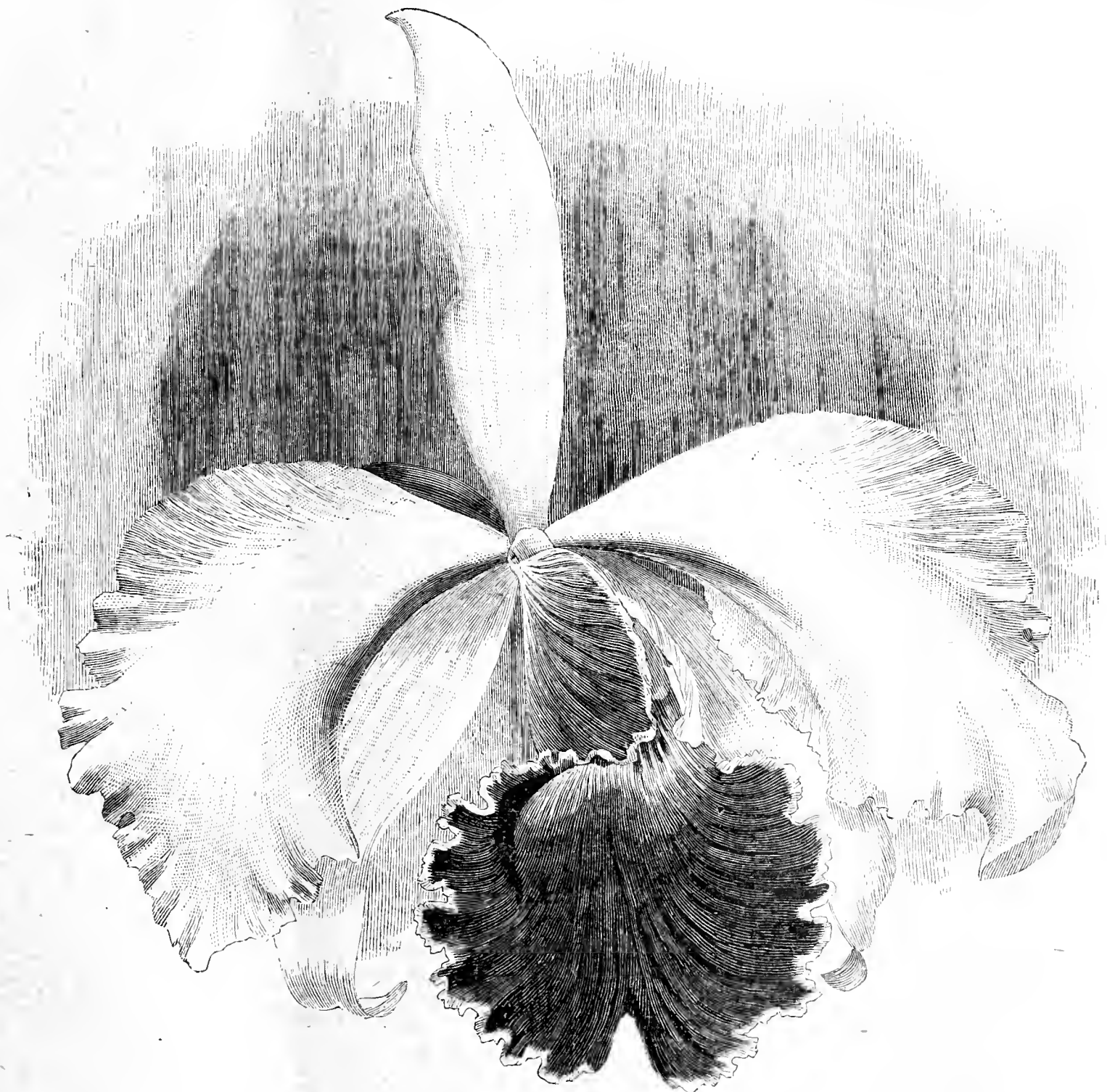


**Lælio-Cattleya Canhamiana alba.**

For size and handsome appearance this is a most commendable Orchid. Messrs. Hugh Low and Co. have staged plants of it frequently and well at Drill Hall meetings during the past season, and both Messrs. Veitch, Ltd., and Sander and Sons also include it. Coming as a hybrid from *Lælia purpu-*

As a rule the smaller members of the genus are the first to need attention, *O. Cervantesi*, *O. Oerstedii*, *O. Rossi*, and similar species, following on with *O. crispum*, *O. Halli*, *O. triumphans*, and their near relations. The first-named species are best grown in small pans or baskets for suspending, and should they now be in unsuitable receptacles, advantage may be taken of the time to make the necessary correction. Plants of larger growing sorts that are doing well in small pots may be shifted to those of larger size, and other plants that do not usually need repotting may have a little of the surface compost removed and replaced by new, in the form of surface dressings.

It will be noted that when a plant, say, of *O. crispum* is doing well, and has filled a 3in or 60-sized pot, that it is not wise to give an intermediate shift to the 4in size, but place it at once in a 48 or 5in, the greater freedom for the roots



**Lælio-Cattleya Canhamiana alba.**

rata and *Cattleya Mossiæ*, it has two of the best known and most prized species in its constitution, and in habit comes near to *L. purpurata*. The sepals and petals of the variety *alba* are white, the lip dark purple, and the throat veined with brown and gold.

**The Week's Cultural Notes.**

The shortening days remind one that it will soon be time to give attention to the *Odontoglossums* and other inmates of the cool house. A stock of pots, labels, and other requisites should be got ready, so that the work may progress quickly when once started. The plants should be given a look round, and all that are ready for repotting selected. The proper time for the operation is when the new-growths are about half formed, as it is just then that new roots are produced, these new roots serving to re-establish the plant in the new compost, that helps in turn to swell up fine young pseudo-bulbs.

serving to carry more nutriment, and incidentally the plant is not so liable to injury as when given a small shift. Naturally, when giving this large shift a great deal of care is necessary with the drainage, but it is advisable, none the less. Again, no one of any experience would think of shifting a plant that was not doing well into a large body of new material. Only the robust specimens can be so treated.

There is not space here to go fully into the details of potting, but as this was given rather recently when speaking of the genus as a whole, those readers who seek instruction on this point may perhaps, look up their back numbers with advantage. It is not wise to give very heavy supplies of moisture immediately after repotting, but as new compost dries more rapidly than old, fairly frequent attention will be needed to keep the sphagnum moss alive and growing. Light sprayings of tepid water from the syringe are useful, and the rose of the syringe should be used when watering the roots.—H. R. R.



## Across the Bay.

Gone are the glories of Donnybrook Fair, and where, erstwhile, the low-backed car ambled o'er the rocky road to Dublin, Peggy of to-day sports the free wheel. Such things live only in Irish song and story; but the eternal hills guard the bay unchanged.

How like eternity doth nature seem  
To life of man, that short and fitful dream.

From our terraced garden we look across the bay to where Howth Head in a gauzy cloud-cap runs far out till its beetling brow, frowning down on the flashing light of the Bailey, drops abruptly to the sea. It is early morning, and the working world, or our portion of it, sleeps the sleep of the just (or lazy, it's hard to get 'em up). What a glorious bit of landscape and seascape it is! The peculiarity of the promontory bringing in the more distant objects of Lambay Island and the miniature islet, Ireland's eye. Glorious? Aye, simply glorious now the rising sun is bathing all in warmth and colour. Truly a worthy study for those artists whose peregrinating propensities lure them from the beauty spots at home. The "White Banks" between the Pigeon House and the Poolbeg sport a green peruke after the recent rains. From here, by courtesy of my Lord Pembroke, we cart, when tide permits, that coarse, white, shelly sand so admirably adapted to all potting purposes. 'Tis a treacherous task though, and our man has to "look alive" lest he should meet the fate of another sand-fetcher, who, a few summers since "got caught"—just escaping on his horse, the cart coming after in fragments on the flood tide. Beyond a growth of scutch-like, breeze defying grass binding the loose sand on the crest of the White Banks, and *Eryngium maritimum*, the Sea Holly, in profusion, a botanising expedition yielded no further fruits save an enormous pair of brogues which some fellow traveller had cast off, doubtless to his great relief.

Just where old Howth (pronounce it Hoathe, please) rises from its sandy neck, stands out clear and distinct a many-gabled, red-roofed mansion, an additional attraction to looking across the bay, for there an old friend and onetime neighbour works his labours of love in gardening generally, and amongst a profusion of hardy plants and flowering shrubs in particular; such, indeed, as in variety and disposition are rarely met with. "Come and see. . . . Yours very truly, Gerald Carroll." We went, and saw a host of things beautiful and interesting, too numerous to detail, but rather is it the *tout ensemble* of the grounds and gardens around Sutton House which appeals to the gardening critic than individual specimens or masses. The informal, picturesque, and extensive residence lends itself admirably to the situation, the grounds surrounding it forming such a happy blending of nature and art that one wends their way from highly-kept terrace walk to the rugged simplicity of the Head unconscious where the one ends or the other begins. Choice specimens and groups are noticeable near the mansion. There is a dark foliaged clump that might be passed as that purple Plum of uncouth name which has entered so largely into modern planting; but "The master," Andrew Jameson, Esq., whom we meet inspecting his treasures, in which he takes a keen interest, points it out as *Rosa ruberrima*.

A sturdy hedge of the Sea Buckthorn, *Hippophae rhamnoides*, guarding the descent to a dell, is charming in its berried wealth during the dull season, its secret of vigour being the sea, so near at hand that westerly winds, which are dreaded here when angrily disposed, must all but carry the spray into the grounds. In its happy abandon of planting and keeping the higher portion of the grounds approaching the Head there is an added charm to the culture of hardy plants, conspicuous by its absence in orthodox bed or border, or even rockeries as often seen. Here one picks their way around clumps of the little Rock Rose and similar things, with ubiquitous turnings on either hand by natural walks, with here and there a rough flat stone so disposed as to ensure a foothold. Whilst meditating and arguing, as gardeners will argue, on that hot summer Sunday, a bolt from the blue, in the form of a heavy thunderclap reverberating to the opposite shores, our own side of the bay, caused a hasty descent to the more sheltered part of the gardens. Here, in the gloaming, we wander through the alleys and paths of a quaint bit of old-world gardening quite secluded from aught else. It is the original garden, and is kept pretty much the same as when its former owner, the late Mrs. Lawrenson, enthusiastically worked up her grand

strain of St. Brigid Anemones prior to changing her residence across the bay. There is a giant standard *Ceanothus*, large enough to picnic under, huge Bamboos, and ancient Dijon Roses, with many beautiful Teas, now at their best, ramble away over tree and trellis pretty much at their own sweet will. A curiosity in cut stone, in the form of an antique coat of arms is embedded high up in the wall, and zealously preserved by Mr. Jameson. One would like to know with what old family it is identified, but probably the heraldic memento now pertains to those " . . . whose bones are dust, and souls are with the saints we trust."

Our friend has a handsome clean crop of Melons to show us in a small lean-to stove, and other glass houses have to be inspected. The glass department is not extensive, and G. C. would like more. Was there ever a gardener worthy of the name who would not? However, from the encouragement he has already received from a generous master, he will doubtless sooner or later be the happy overseer of some good vineries in place of the present old-fashioned structures, for which there are positions against the high, massive walls suggestive of suitability for their erection. Vegetable and fruit quarters at Sutton House are extensive, and pre-eminently well cropped and kept; a feature of these being a strongly-stayed palisading to protect all from the breezes of the bay. We could not but admire our friend's comfortable cottage, the healthy look of his olive branches, and the liberal hospitality of "the missus," and not less his agility, as at a late hour he rushed after and held up the last electric car, saving us from being stranded at night across the bay.—K., Dublin.

## Potting Primulas.

As good strong plants of Primulas which are likely to throw up vigorous flower stems in autumn, winter, and spring are appreciated, the stock now established in small pots and needing a shift should be looked over. Select those which have their pots full of roots, bushy fibrous roots, pushing freely round the edge of the surface soil. The leaves should be stiff, luxuriant in colour, and have short stalks. The latter are always brittle, but more so when the plants have been crowded and are consequently flabby. Flower stems issuing from the centre may be nipped out at present, both from Chinese Primulas and *P. obconica*. The leaves of the latter variety cause irritation of the skin with some people, so it may be advisable to protect the hands with gloves when handling these plants.

A suitable compost consists of three parts turfy loam, one part clean leaf soil, one part decomposed manure with a free admixture of sand, crushed charcoal, and a sprinkling of wood ashes. Incorporate all together, bringing it to a moist, though not a wet, condition. Employ clean, dry pots, crocking them carefully, and cover the drainage with some clean rough material. The plants must be moist before turning out of pots. Loosen the bottom roots and remove the crocks they enclose. In the actual process of potting sink the ball so that the plant will be rather deeper in the soil than heretofore. In fact, when the potting is finished, the plant ought to be quite secure and not wriggle about at the collar.

A moist frame covered with a light is the best place for them at first, giving the plants ample room. Water will scarcely be needed for some days, but afford shade from strong sun, and dew the plants over in the evenings of warm days. The first watering should be copious enough to pass through the whole mass of soil and roots. When renewed growth becomes evident by the production of young leaves in the centre, and the enlarging of the older foliage, fresh supplies of air are necessary daily, and on warm nights full exposure is beneficial; but guard against soaking them by allowing heavy rain to reach them.

As a means of affording the plants when growing freely all the advantages of free ventilation to induce a stocky habit, the plants may be elevated on small pots. Allow room to place the lights over, though the frame will rarely require to be completely closed down. Here the plants may remain until it is necessary to house them on a shelf near the glass in the greenhouse early in October. If wanted to bloom in the late autumn, the first flowers should be left to develop. For a later display nip out the trusses which show now.—S.



#### The Rapid-growing Hop.

It is strange the Hop Vine does not figure more prominently in plantings where a rapid-growing vine is wanted. In the fall it dies to the ground, coming up again luxuriantly in the spring. The leaf is rather large—just a trifle coarse, perhaps. There is also a golden-leaved variety. Notwithstanding the commercial connection, the plant is valuable as an ornamental.

#### Growing Tomatoes.

Most growers of Tomatoes for sale or export aim at producing very large smooth fruit. That the smooth variety is preferred to the wrinkle kind is evident from the fact that the public, as a rule, do not care for the latter, and that a better price can be obtained for the former. But abnormally large Tomatoes are a mistake. As a general rule, the public prefer a moderate size. The housewife does not like getting two or three fruits to the pound, because there is often much wasted in the large sizes. From 2in to 3in in diameter is quite large enough, and such Tomatoes will always command a better price than the very large ones, which are more useful to the cook for "fancy work" than for general purposes.

#### The Fruit Crop.

Looking at the fruit crop no one will doubt that the frost has hit us hard this year. Most gardening people have suffered, some more, some less, but all in a degree. Everybody feels himself to be the most injured, too, which is our natural way of looking at things. The fruit-grower, who has hundreds of pounds at stake, may be, complains no more in his way than an amateur friend of mine who grows Irises for a hobby, and was nearly heart-broken when the frost spoiled all his chances of bloom. In a general way, however, we can only hope that matters will not eventually be so bad as they appear to be, though I doubt many fruit-growers and market gardeners will have reasons to remember the May frosts of Coronation year.—H.

#### What a Price!

It is obvious that any amateur who is ready to hand over £425 for a single plant of an *Odontoglossum* must not only be willing, but also in a position to pay for his hobby. I saw the plant which fetched the above sum (figured on page 507, last vol.) at the Temple Show, and agree that it was one of the finest there. But four hundred and twenty-five golden sovereigns for a plant that might take a perverse fit and die next week! Almost incredible, isn't it? It may be accounted for by the fact that the present owner will be able to say that no one else has got one like it, which I believe is a reason why many art treasures and antiquities fetch such long prices. One would like to learn the history of *O. crispum ardentissimum*, which, I suppose, was no more romantic than the rest of the *crispum* family, until it flowered and revealed its character.—G.

#### Durability of Different Woods.

Experiments have been lately made by driving sticks, made of different woods, each 2ft long and 1½in square, into the ground, only ½in projecting outward. It was found that in five years all those made of Oak, Elm, Ash, Fir, soft Mahogany, and nearly every variety of Pine, were totally rotten. Larch, hard Pine and Teak wood were decayed on the outside only; while Acacia, with the exception of being also slightly attacked on the exterior, was otherwise sound. Hard Mahogany and Cedar of Lebanon were in tolerably good condition; but only Virginia Cedar was found as good as when put in the ground. This is of some importance to builders, showing what woods should be avoided and what others used by preference in underground work. The duration of wood when kept dry is very great, as beams still exist which are known to be nearly 1,100 years old. Piles driven by the Romans prior to the Christian era have been examined of late and found to be perfectly sound after an immersion of nearly 2,000 years.

#### King Edward's Oak.

When he visited New York some forty years ago as Prince of Wales, the King planted an Oak in the Central Park, New York. Some two months ago, when the King was taken ill, the tree began visibly to fail, and was thought to be dying, but owing to the judicious treatment of the landscape architect of the park it has revived, and now seems to be, like its planter, in a fair way towards recovery.

#### Coronation Carpet Bedding.

The gardeners in Victoria Park, the great East End breathing space, have just completed their Coronation bedding. The chief feature is an immense scroll near the boating lake. This is nearly 150ft long, and bears the motto, all in various colour plants, "God and His Angels guard thy sacred Throne, and make you long become it." Underneath, in patriotic-coloured flowers, is the prayer, "God save the King!"

#### Electricity as a Stimulant.

Electricity for stimulating the growth of cereals, vegetables and other plants has been tried in many experiments by Dr. Selim Lemstrom, the Norwegian investigator. On arable land of medium quality, an increase of 45 per cent. in the crops has been obtained, but the increase is greater in proportion to the care in cultivation. The effect is trifling on poor soil. The electric current proves injurious to most—if not all—plants in hot sunshine, and such plants as Peas, Cabbages and Turnips are favourably influenced only after watering. Estimates of cost lead Dr. Pringsheim to conclude that electricity in agriculture will pay.

#### Phlox Drummondii nana compacta.

Phlox Drummondii is, of course, grown in every garden, but everyone may not be acquainted with the dwarf form under notice. Let me advise any who have not grown it to make a beginning this season. All the glowing colours of Phlox Drummondii are represented in the dwarf forms, but the habit is compact, and when grown in masses the diversity of colour is very striking. The plants are also very useful for edging purposes, and are also suitable for pot culture. During the hot summer of last year, when most of the annuals were sorely tried, these dwarf Phloxes kept up a bright display of flower and were generally admired.—H.

#### The Lightest of Woods.

Deep in the bogs and swamps of South-eastern Missouri, there grows a rare and curious tree known as the Corkwood or Cork Tree, or in science as *Leitneria floridana*. It reaches a height of 15ft to 20ft, and a diameter of 2in to 5in. What makes Corkwood so remarkable is its exceeding lightness, it being the lightest tree in weight that grows. It is so light that the natives use it to make floats for their fishing nets; and yet its wood, though so spongy one may easily sink one's finger in it, is far tougher than cork. The specific gravity of corkwood, as learned from careful tests, is 0.207. The roots are even lighter than the stem; a test showed them to have the astonishingly low specific gravity of 0.151. The great majority of woods range between 0.400 and 0.800. Cork itself is 0.240.

#### The Orange.

The Orange is of comparatively modern introduction in horticulture. It is not mentioned in the Scriptures, nor by Herodotus, who lived five centuries before Christ, and who wrote a list of fruits then known, nor by Virgil, who wrote much about such matters 100 years before the Christian era. The Orange came originally from the south of China, Burmah, and India. It is found growing wild in the jungles in various parts of India. The Arabs introduced the Orange to their country, and thence it got to Syria and Southern Europe. This was probably the Bitter Orange. The sweet variety was brought to Europe about the fourteenth century by merchants of Genoa or Portugal. Thence the tree was passed by the Spaniards and Portuguese to the Azores and other parts of the "New World," and found congenial conditions. Mexico, Florida, California, proved to be highly suitable. The St. Michael Orange originated in the Azores; the Pernambuco and Bahia (or Navel), were both named after provinces in Brazil. The Orange is now found growing in nearly every country where there is enough sunlight and absence of severe frosts.





#### Insect-proof Roses.

Rose bugs and leaf slugs are so numerous some years, one is easily discouraged in outdoor Rose growing. The Japanese *Rosa rugosa* and the *Wichuriana* Roses are very much of an encouragement, for thus far they seem to have evaded the pests. This may be accounted for in the late blooming character, the major part of the Rose bugs having completed their destructive work and disappeared, and also in the rough leaves of the *rugosa*, and the tough ones of the *Wichuriana*. *Rosa rugosa*, both red and white, are being largely used and their value appreciated. The others have not yet come in for their full share of popularity as arbour vines and for trailing over low walls. An attractive way to have a few plants is to stake them and allow the branches above to fall gracefully over. (See illustration.)

#### Rose Field Marshal.

This new Rose, which received an Award of Merit at a recent meeting of the Royal Horticultural Society, is a very handsome free-blooming, climbing, crimson China Rose, introduced by Messrs. Wm. Paul and Son, of Waltham Cross, as a companion to *Maréchal Niel* in the greenhouse, and also excellent for climbing out of doors, where it can have the protection of a wall or building. The flowers are very deep rich blood-red, of the colour of *Cramoisie Supérieure*, but nearly twice the size of that variety, fuller, and more even and regular in shape, many of the blooms produced at Waltham Cross rivaling *Maréchal Niel* in size and form. No climbing Rose in cultivation equals *Field Marshal* in richness of colour, combined with regularity of form, the nearest approach to it being the climbing form of *Cramoisie Supérieure*, to which it is immeasurably superior in the points named above. It is not yet in commerce, but plants will be ready for sale by May. (See illustration.)

#### Rosa Wichuriana.

It would be impossible to over-estimate the great usefulness of this Rose and its progeny for covering gravel banks and barren spots in the landscape; although now well known, they are not, perhaps, so extensively planted as one would naturally expect. In the making and renovating of the home grounds, parks, &c., gravel banks and other unsightly places are invariably exposed to view; not necessarily by design or accident, but arising from various other uncontrollable causes. There is a limit to the variety of plants adapted for such situations, but the difficulty has of late become somewhat reduced by the introduction of a number of splendid hybrids, emanating from *R. Wichuriana* and the Tea Roses. That these have been gladly welcomed by the landscape gardener is inevitable.

Now that the dormant possibilities and expectancies of crossing this *Rosa* with the Teas has been discovered, it is more than probable (says the "Florists' Exchange") that each year will produce other additions to the existing list. *Pink Pearl*, *Gardenia*, *Jersey Beauty*, *Evergreen Gem*, *Manda's Triumph*, *Pink Roamer*, *Universal Favourite*, *Scuth Orange Perfection*, *White Star*, *Crimson Roamer*, all have inestimable qualities.

Where it is desired to create what landscape men lovingly call a "natural" effect, do not hesitate to plant the above list: in two years the plants truly present all the careless abandon of Nature. As some of these varieties are extremely vigorous, making from 35ft to 40ft of growth in a season, it is not wise to plant them too near to other choice things, for in the usual struggle for life and superiority the Roses will win out with honours. We have several banks here that would now be a most interesting study to students of the "survival of the fittest" theory; in fact, most useful data could be secured. We are watching a fight now in course of progress between a section of *Honeysuckle* and *Rose Pink Roamer*. The latter pushes out its great, sprawling, octopus-like tentacles over the *Honeysuckle*, something like a spider grabbing a fly; the *Honeysuckle* resents this by quietly hitting the *Rose* below the belt. *Pink Roamer's* great shoots are now being gradually drawn into the net of the *Lonicera*. We now think the *Honeysuckle* will win. The case is different with small trees and shrubs, and if the Roses are not kept within bounds soon the former become swallowed up.

If you have a bank planted with "any old thing" and wish to change this from bad to artistic, grub out a shrub or two here and there and replant with some of the strongest growing of these hybrids; in two or three years that bank will be a

dream. These Roses will thrive well under trees, if a reasonable amount of light is obtained. *Jersey Beauty* is grand for this purpose. I have in mind a group of *Silver Birch*, with this Rose as an under cover. The flowers are 3in in diameter and of a soft yellow, with bright yellow stamens, and in profusion. An effort of this kind is refreshing and enjoyable, and will do more to soothe a ruffled mind than kind words.

Before planting, the soil should be well grubbed and manured, this is particularly necessary when planting under trees; it induces the plants to move quickly. Plant about 5ft apart, or even closer if immediate effect is desired. Nothing in the line of insects seems to bother these Roses other than that little green caterpillar, which we all knew so well in connection with Roses. In slug shot we have a faithful friend and an infallible remedy. It matters not, on analysis, what may be the market value of its chemical constituents, it does the work required with dispatch and certainty. We have never had to give more than one application per annum; it's worth a dollar a pound to you, after you have been humbugging around with other things.

*R. Wichuriana* seems to have one advantage over its progeny in flowering later. It arrives on the scene with a cheerful gaiety, most acceptable after the hybrids have been and gone. July 15 it is in all its glory with us; and at that time, when most of the flowering shrubs are over, it lights up the landscape and is gladly welcomed.

## Notes on Pines.

#### Preparing Houses for Plants.

Thorough cleanliness is very important in the cultivation of Pine plants: wash the houses, therefore, as they become vacant before being again employed. Attention must be given to beds, as bottom heat is absolutely necessary. Whether the beds are of tan or leaves, the whole should be removed at least once a year, as insects, particularly woodlice, rapidly increase, the old material also harbours other vermin. All brickwork must be scalded and brushed with fresh-made limewash, the wood and ironwork with carbolic soap and water, thoroughly cleansing, using a brush, keeping the soapy water as much as possible from the glass, which should be cleansed inside and outside with water only. If necessary the wood and ironwork may be painted, always in time for the paint to become hard before putting in the fermenting material, the roof being made as watertight as possible. Beds that are chambered—that is, the hot-water pipes covered with slate or other material—are much in advance of those surrounded or passing through beds of rubble. Those composed of the latter should be turned over, and any dirt removed to allow the heat given off by the pipes to penetrate the whole uniformly to the bed. Provide fresh tan in other cases; if wet, turn it occasionally on fine sunny days. With hot-water pipes beneath about 3ft depth of tan is ample, but more will be needed where such aid is not obtained.

#### Potting Suckers Started in June.

When these have filled the pots with roots, shift them into larger pots before the roots become closely matted together. Queens are accommodated in 9in or 10in pots, and those of stronger growth in 11in pots. Give water immediately after potting if the soil be at all dry, and plunge in a bed having a temperature of 90deg to 95deg. Avoid crowding the plants, this being one of the greatest mistakes made in growing young Pine plants, as they become drawn and weakly instead of having a sturdy base, a condition that should always be secured if possible.

#### Routine.

Attend to the bottom heat of beds that have been recently disturbed or upset by removing or replacing plants, not allowing the heat to exceed 90deg at the base of the pots without being immediately raised, as too much bottom heat will disastrously affect plants with fruit, or those having the pots filled with roots. Examine the plants for watering about twice a week, and maintain a moist, genial, well ventilated atmosphere. The climatic conditions are now so favourable that Pine plants grow luxuriantly, therefore discontinue any shading, such as may have been employed for an hour or two at midday when the sun was powerful through the months of May, June, and July, the plants after this having the benefit of every ray of sunlight, admitting air plentifully when the temperature ranges from 85deg to 90deg, affording fruiting plants a night temperature of 70deg to 75deg. Some suckers should be reserved on the old plants for starting in September.—PRACTICE.

## A Spring Day in British Columbia.

There will soon be thirty lumbermen felling some of the giant Douglas Firs in our valley, then floating them down on what should be called a "lagoon," but is horribly styled a "slew," though it has no resemblance to a "slough of despond" or of any sort. The trees will be put into rafts and so sent to the Fraser River, when it is at flood in May or June, and then navigated by loggers to the Harrison Sawmills. All this will be new to me, for the only tree-felling we do on the farms here has been to clear the land for cultivation and then set fire to the giants as they lie on the ground. There is not much of this laborious work to be done on the farms in the immediate vicinity, but a few miles "up the slew" the Cedars and the Pines are magnificent, and the lumbermen have found them out. The prohibition issued in January last against the exportation of logs into the United States has already worked marvels of benefits to the sawmills, lumbermen, and trade generally of British Columbia. I heard to-day that all the sawmills could run day and night if they could get the logs, as the huge trees are called; so our valley is to be busier than for some time, and the sound of the woodman's axe will be heard all through the spring and summer.

I see that our Agent-General has been giving a useful lecture about British Columbia. He related how some young man asked him about revolvers and guns, and how many he should take if he went to British Columbia. I think I should advise everyone that keeps poultry to have a gun if he can shoot, for hawks come and there are lovely wild ducks and grouse, and the blue jays and the robins (really thrushes) play havoc in the kitchen garden if no one teaches them to respect the rights of property. Revolvers are strictly forbidden. If brought at all they must not be used except on burglars! then a gun does as well nearly. The birds of prey harry my neighbours' poultry terribly. They know who shoots straight, and do not come here.

I wonder every spring, as the various beautiful shrubs begin to burst into leaf, whether many settlers will come our way this year. The Canadian Pacific Railway Company shows that the traffic grows, but what would be cheering would be that every passenger train disgorged its living freight of earnest home-seekers who would hire traps, pester every one with questions, make sketches or "kodak" the scenery and farms and make plans, and then come and settle, if not at Agassiz, in some equally lovely district. The sort of thing they could see and kodak would be what I saw yesterday a couple of miles from my own more recent farm-home. I set out to walk to my farmhouse, and as I went listened to the birds twittering their first notes, and the thrushes—absurdly called "robins" here—piping the

three first notes of the English thrush's song, then stopping short. Then I listened to the "slew" making a noise like what we call the "rippling" of a brook in England, and noted the changed look of spring coming over the Birch and Maple trees. The clouds were skimming along the face of the Great Mountains, all deep china blue for two or three thousand feet of their height, then capped with glorious snow and denser clouds and such lights and shadows as, I suppose, no one could paint or kodak. Then over a rustic bridge without a railing of any kind over this rippling "slew," into an orchard of Apple, Plum, and other fruit trees, all well trimmed and neat. Thirty porkers came grunting towards me, needing no flattery or explanation, for there could be nothing better at the Islington show, and they are "registered," too, as thoroughbreds. I found the farmer, who is a widower, and his old uncle resting a bit

before dinner at twelve o'clock, for the churning of a huge lot of butter had just been completed, and the uncle was preparing the meal. I had to see the pedigree Ayrshires, the horses, and the splendid new barn, bigger than many a church, and I had to listen to a tale of early Cariboo days. "Cariboo days" correspond with English ideas of "Norman or Saxon days"; for the uncle was a Cariboo miner in 1857.

I remarked what a fine man and how handsome Lord Kitchenner was; his portrait hung on the wall, as it does in many a Canadian home.

"Yes," said the old fellow, "he reminds me of Sir Matthew Begbie" (Chief Justice in Cariboo days).

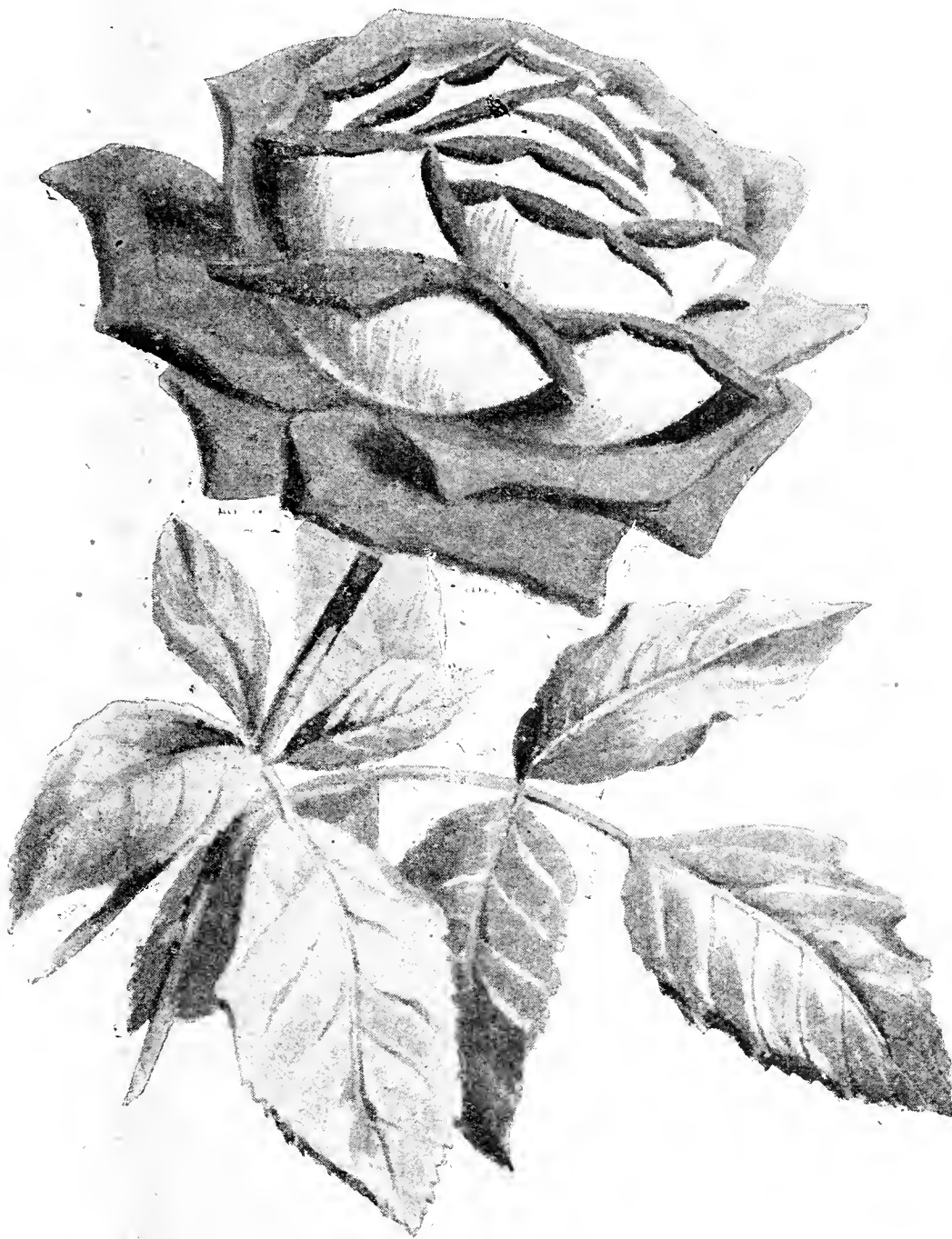
I said Sir Matthew ought to have been in the Transvaal ten years ago; how well he kept the rowdy American element down in British Columbia.

"Yes," said the old miner, "I remember."

On one of the Judge's tours he rested his horses and himself in a well-grassed district, and while he rested he fished; he laid a fine trout on the bank and went further up the stream for more.

A Yankee came along and cut up the beautiful trout for bait and went a-fishing, too. When the Judge came back he inquired who had cut up his trout. "I did," said the bullying teamster or poacher. "Then you are no gentleman," said the Judge. "I will give you a thrashing," said the bully. "if you dare say that to me." Said the Judge ("he being well scienced," said the old miner). "Sir, I can oblige you if you want to fight, and I repeat you are no gentleman to have cut up my trout in this way." Upon which the offender fell upon him. As the Judge punished him very severely with his fists, the brute took to kicking, but the Judge held him off and made him sue for mercy.

This was only another little feather in his cap, for every law-loving miner and teamster respected Judge Begbie, the right man in the right place, and he often thought his right place was in the midst of the roughest and most dangerous characters. With his cook, his mule, and his horses, he went to carry out the law, and he did it without flinching.



Monthly Rose Field Marshal.



Revolvers or bowie-knives were regarded with detestation by him.

The squirrels, the woodpeckers, and the magpies chattered in the hazel and birch trees, the frequent report of the blasting that the railroad men and stump clearers were carrying on, and the ordinary farm sounds reminded me on my way home that it was springtime, and that thousands besides myself might make a beginning in this lovely land and found homes, possess farms, enjoy magnificent scenery, and never be "out of work." And so I sat me down and tried to tell the perplexed home seeker in far away England what I saw on a spring day in British Columbia.—("The Outlook.")

## Fern Fronds.

When we consider the practical identity of purpose of the Fern frond, viz., to bear the spores which are necessary to reproduction, and by that interaction between leaf and root, common to all plants, to propagate the individual plants by offsets, we can hardly fail to be amazed at the marvellous diversity of form which has been evolved. In size alone, the extremes extend from small, almost grass-like, plants—*Asplenium septentrionale* to wit—to tree-like growths which rival the Palms and bear circlets of fronds many feet in length, such as the *Dicksonias*.

It is, however, in the direction of diversity of cutting and make that wonder is mainly felt. In one direction, namely, that of mere division and subdivision, we have Ferns like the native Hart's-tongue and various exotics which are simply strap-shaped, without any tendency to division at all. Next we have the *once divided* ones, like the common *Polypody*, which may be roughly compared to a double broad-toothed comb, tapered to a blunt point; or, in another family (the Shield Ferns) we have the Holly Fern with a row of undivided prickly Holly-like pinnae set on each side of a midrib. In its relatives, the soft and hard Shield Ferns, the frond consists of a double row of pinnae, each of which is divided like a Holly Fern frond, i.e., bipinnate; while in the Lady Fern we get even in the normal growth a still further division, i.e., tripinnate with the ultimate division saw-toothed, indicating a step towards further division. A very large number of Ferns, embracing all the Tree Ferns, build up their broad spreading fronds on these fundamentally simple lines of division and redivision, the extent depending largely on relative freedom of growth.

A further study of this divisional system will show that as a rule the same plan prevails throughout, i.e., the inner divisions are replicas of the entire frond, just as small crystals are built up on the same plan as larger ones. In watching, indeed, the development of a Fern frond, especially the angles assumed by the veins, the idea of vegetable crystallisation is strongly borne in upon the mind, certain geometrical laws being as closely followed in the one case as in the other. Outside, however, of this general mode of construction, we find on the one hand such curiosities as the *Platycerium* or Elk-horn Ferns, and the *Adiantums*, the former characterised by huge, leathery, forked fertile fronds, and almost circular barren ones, and the latter, by having the minor divisions shaped variously, but usually like fans, and attached to shining black stalks. How much variation may be infused into this plan is seen by comparing the lovely *Adiantum farleyense* with *A. cuneatum gracillimum*; or, lower down in the scale, with *A. reniforme*. On the one hand there are huge, pendulous masses of delicate plumage with fringed divisions an inch across, and on the other a more or less dense mass of tiny divisions on a little stiff growing plant, each frond a mere stalked Fern a few inches high.

Despite, however, the wonderful diversity which Nature has managed to introduce in this way with the normal or specific types, she is by no means content therewith, and has invented, and indeed is constantly inventing, variations upon them in the form of "sports," some of which differ by going a step or steps farther in the direction of finer cutting, associated it may be with additional leafiness, to others she attaches more or less ornate tassels to all the tips; varying this again by the extent to which she carries out the idea; while in other cases she varies the make and shape of the parts in infinite ways, altering the habits of the plants concerned into gigantic or dwarf types, or on more eccentric lines. In this peculiar faculty, the Fern frond, as distinct from the leaf of the flowering plant, "sports" to a far greater extent, the former assuming eccentricities which are never seen in the latter. The only flowering plant which has tasselled leaves is a crested form of *Asparagus plumosus*, and even in this, the tasselling is associated with foliage almost identical in type with Fern frondage; while a very large number of Fern species have yielded tasselled forms, and some a greater number.

Perhaps, however, the most curious fact connected with the

Fern frond, the association of which into a Fern plant constitutes the entire popular conception of a Fern as a Fern, is that Ferns might exist without them, since all their vital functions of existence, including reproduction, may take place on a microscopic scale in a phase of existence which precedes the appearance of fronds. During this phase the Fern exists in the shape of a tiny, flattish green disc, attached to the soil by root hairs, and rarely more than a quarter of an inch across. On the under side of this disc, called the "prothallus," the equivalent of male and female flowers bud out from its surface, and in the normal course, produce between them a fertilised seed, from which the frond-bearing Fern subsequently springs. This almost invariably happens, but it has been found that spores may be produced on this disc itself, and it is only necessary to assume that these spores would again produce spore-bearing discs to see that fronds need never appear; existence would continue from generation to generation as a mere green coating to the soil, like a small Liverwort, and all the myriad lovely forms with which we are familiar in the Fern world would be non-existent.

The frond, however, is a great aid to the Fern plants by presenting an infinitely larger area for spore production, associated with a better chance of these spreading by wind or other agencies. The attendant formation of deeply penetrating roots in lieu of the purely superficial root hairs of the prothallus, afford also a much greater range of environment. Every Fern, it is true, must pass through the small disc stage at the outset, but a short rainy period would enable it to establish itself as a frond and root bearer, and thus survive a subsequent drought which would inevitably shrivel and kill the disc. The advantage afforded by the fronds and roots is therefore manifest, and the acquisition and development of these have, doubtless, been the evolutionary factors which have lifted the Ferns so far above their lowly cousins the Liverworts, in the scale of plant-life, while their diversity has to a certain extent been the outcome of adaptation to various environments, plus determining forces in the sportive direction, which as yet completely baffle the biologist's research so far as the cause is concerned or any law regulating their appearance.—CHAS. T. DRURY, F.L.S., V.M.H.

## Melons at Barford Hill, Warwick.

During a season like the present, when these showy fruits are in many instances unsatisfactory, and when complaints about canker in the stems and rotting in the fruits are numerous, it is pleasant to record a distinct cultural success. During a recent visit to Mr. R. Jones, the well-known gardener to C. A. Smith-Ryland, Esq., I was greatly impressed with a splendid crop growing in a span-roofed structure. The plants were arranged 2ft apart and they only extended up the roof a distance of 4ft or 5ft, yet in no case did I notice less than four Melons on a plant. In one instance I counted six, and in several five. All these were fruits which had swelled simultaneously, and were netting beautifully. Experienced cultivators know that it is not an easy matter to get so many fruits per plant to swell satisfactorily at the same time. The varieties were Lockinge and Frogmore Scarlet. During the recent dull weather Mr. Jones has not been sparing with fire heat, and no doubt to some extent this explains the freedom of the plants from canker or decay. During seasons like the present we should hear far fewer complaints about mysterious diseases among both Melons and Cucumbers, if cultivators generally would use more fire heat, as a low temperature and too moist an atmosphere bring ruin to thousands of plants.

The use of suitable soil is another point which requires more attention than it often gets. During dull weather the roots of plants necessarily get somewhat sluggish, even when surrounded by congenial conditions in regard to soil and temperature, and when the soil is too close in texture root action is still further lessened, even if decay—with its inevitable result, disease and collapse—does not set in. At Barford Hill, after a good deal of searching, good soil has been obtained, nice brown turfy loam, "springy" to the touch and full of fibre. This is packed firmly on the hard bottom which forms the raised bed, nothing is added to the soil, and white active roots quickly find their way to the edges of the turf. When the fruits begin to swell, top-dressings of chemical manures are given, stopping and tying of course regularly attended to, so as to keep the reserved shoots and leaves thinly disposed, and at the same time to have a little young growth constantly going on. In an early house where the crop was cut some time ago, a second batch of fruits were swelling rapidly on the old plants, which were as healthy and vigorous as one could wish.—H. D.



### The Great Sequoias.

I notice your reference, in recent issue, of probable injury to some of California's "big trees" (Sequoias, or Washingtonias, or Wellingtonias) through fire. I am happy to report that the U.S. troops stationed at Wawona were able to check the fire before it reached the Sequoia Grove. This is the Tuolumne Grove (pronounced Tu-o-lum-ne), with which I am very familiar. I took the measurements of one of these trees with a ball of twine, and found on reaching home that the diameter of the tree exceeded the outside lines of a tennis court. This gives one a good idea of the immensity of these trees; a few groups of a hundred or two standing among the forest of Cedar and Pine which extend for hundreds of miles north and south, and nearly forty miles in width. Unfortunately the fires which annually occur destroy thousands of acres, and the axe of the lumberman cares naught for the morrow.—LEONARD COATES, Napa, California.

### The Effects of Frost.

When last spring there appeared an article from my pen in the *Journal of Horticulture*, entitled "The Season of Blossom," I was in a hopeful mood, because just about that time prospects were indeed fair. The weather had been cold, and the season was backward; but gardens looked promising, and fruit growers were particularly sanguine. Indeed, they had reasons to be just then, for the country all about was a sheet of living bloom, and the question of heavy fruit crops was hopefully discussed. But before my notes appeared in print something happened which necessitated the insertion of an editorial foot-note. It was a series of light frosts and one heavy one, when the thermometer in my garden indicated 10deg, and since then the aspect of affairs changed considerably, and, unfortunately, for the worst.

My first impulse on that memorable morning (I need not trouble about the date, as most gardeners have good reasons for knowing it) was to walk through the garden. I had been there the night before, and had congratulated myself that, so far, a promising patch of early Potatoes had escaped; but 10deg of frost was too much for them. The tops were covered with a thin silver crusting, that quickly vanished under the influence of the sunshine, and left nothing but black ruined growths. They subsequently started again, but they merely presented a number of thin weakly shoots instead of one healthy growth, and this I knew meant a late and light crop. A neighbour who had looked somewhat enviously at those early Potatoes came round to see the damage, and sympathised with me in a most comforting, but human manner. "You shouldn't have been in such a hurry," he said. "I'm glad to say mine aren't through the ground." Only two days before he was excusing himself for being late with his Potatoes.

But I was not the only sufferer, and my loss has been nothing compared to that of some of my neighbours. During the day a market gardener called, a hard working man, who makes a living, but is not growing rich, on a few acres of land. "Three acres of Potatoes clean spoiled," that was his dismal story, so far as one crop was concerned, but his troubles did not end there. He has a plantation of Gooseberries and Currants, from which he was hopeful of reaping a nice little return, as the bushes were heavily laden with fruit. He was trusting that the foliage would protect the berries, and at first they seemed all right; but later on the effect of the frost could be fully seen. The ground beneath was strewn with black and shrivelled fruits, and comparatively few remained on the branches above. Amateurs and private gardeners fancied that they had been hard hit; but it is the men of the market-gardening class, who look to early crops for a living, that have had the greatest reason for deploring that deadly frost.

"I don't know what to make of it," said a working fruit-grower to me in those days, as he cast an anxious glance round his orchard. "We had such a show of bloom that if three-parts of it goes there will still be a crop; but I am not very hopeful." In company we walked amongst the trees. The white petals had all flickered from the Plum trees, but instead of plump little green fruit remaining, they were mostly black, shrivelled, and falling. "I doubt it's over with the early Cherries," continued the grower, and in his case it was a certainty, for an examination displayed the same sad state of

affairs as in the case of the Plums. In the case of Apples there did not seem to be the same cause for anxiety. Many trees were in bloom when the frost came, the changing of the bright pink of the flowers quickly to a dull brown being not a good sign, and in many places the frost very visibly left its mark. The bloom, however, was exceptionally thick, so to that we owe the present average crop, and also to the fact that the later flowering varieties were not out fully when the frost came, and the weather subsequently grew more genial.—RUSTICUS.

### Overtime.

The subject of overtime will not fail to interest the young men in the bothy, particularly if they happen to be doing a few hours every evening now without any addition to the stipend on Saturday night. From the views put forward by "R. P.," the average gardener must be something of a natural overtime working animal, possessing an inherited tendency for this from his parents. I don't say that it is so, but I have known gardeners of this order, and have made one of the luckless bothy staff who were expected to put in an extra hour or two when the days were long enough, quite as a matter of course. There are times when overtime is necessary in most gardens—in the Grape thinning season, for instance—but except on such occasions I quite agree with "R. P." that a good deal of it could be dispensed with if a better method of arrangement was in force; but then, as your correspondent remarks, it is not easy to change from bad methods to good ones. It is largely a question of moderation; but when a man, be he head or under, has put in from ten to twelve hours in a day he has done enough, as a rule.—H. L.

### The Bothy.

In looking over the back numbers of the *Journal* I find some strongly-worded articles on "The Bothy," a subject teeming with interest, and admirably adapted for the display of passionate declamation, with which some of your correspondents appear superabundantly gifted. Although I emphatically concur in the expediency and necessity of reform, I view with ridicule the suggestion that the bothy system should be wholly abolished. Why condemn the entire system because in practice it shows the need of alteration? Should we reject a machine, correct in principle, accurate in construction, because the presence of rust and absence of oil prevent its harmonious working? Clearly the advocates of such radical measures display an *ignoratio elenchi* and a misconception of the elementary logic of cause and effect. Following their principle to its rational conclusion, we should shoot every broken-winded horse, destroy every foundered engine, and even upset our constitutional form of government, on account of its minor inefficiencies, in favour of a despotic monarchy or the negative principles of anarchism.

These, however, are deductions from which common-sense recoils. Thus one correspondent applies to the bothy the epithet of "moral nuisance," regarding it as the foreign ground of corruption, and a hotbed of all the vices which can be committed by a systematic and categorical breaking of the ten precepts. Truly, "he that saith this hath o'erstept the slippery footing of his narrow wit and fall'n away from judgment." Our worthiest men, whom we look upon as models, horticulturally and socially, have been trained in bothies, and the well-nigh unanimous voice of gardeners, young and old, proclaim that to dispense with the bothy is neither practicable nor desirable. Moreover, the strong argument of mutual convenience and economy to employer and employed precludes the probability of such a fanatic howl emanating from an effeminate minority ever being afforded serious attention. It may be regarded as an almost infallible rule that those who condemn the bothy system are, in the plenitude of their effeminacy and pedantic refinement, characteristically unsuited for such a life; for it cannot be controverted that bothy life is eminently fitted for the early development of that manly and independent spirit so conspicuous in the English—or, rather, I should say, considering my geographic position, British—character. Still, on the need of reform, nearly all seem agreed, and the sooner it can be brought about the better. The ventilation of the grievance, as at present, in a high-class journal, cannot fail to be prolific of good; but some minds are so encrusted with a rusty conservatism, and so filled with an irrational dread of change, that time alone can bring about any alteration.

It is the height of absurdity to suppose that an ideal bothy is necessarily utopian. Such is by no means the case. If it be admitted as proved that a badly organised bothy engenders a devil-may-care spirit and a sublime indifference to his own progress in the young gardener, it may clearly be adduced as a corollary that a good bothy will tend to promote qualities diametrically opposed to these failings.—WM. ROWLES, Edinburgh.



# NOTES & NOTICES

## Too Much Rhubarb.

The production of Rhubarb in the Lambeth Union Gardens has been so great that 1,180lb had to be thrown away the other day because the paupers had got tired of the stuff, and would eat no more.

## The Royal Botanic Society.

The sixty-third annual meeting of the Royal Botanic Society was held on Monday last. The report stated that the list of Fellows had now increased to 2,136. There had also been an increase in the School of Practical Gardening. The expenditure had exceeded the income by £79 9s. The question of raising the subscription was considered, and the report adopted.

## Amateur Gardeners.

The National Amateur Gardeners' Association, Liverpool branch, held their monthly meeting on Thursday last, at the Common Hall, Hackins Hey. Mr. Hitchmough presiding. Mr. Ellison gave a most interesting lecture on amateurs' green-houses. Messrs. Dodd, Paddock, Robins, Ellison, and Hitchmough, Mesdames Stevenson, Macgregor, Harris, Thomas, Morris, and Paddock were the prize winners. Messrs. Dobson, Howard, and Morris acted as judges for the evening's exhibits.

## Sunken Trees.

The laying of new gas mains in Finsbury Pavement has been the cause of an interesting discovery in the shape of old trunks of trees which were in old time laid as water conduits. Finsbury Pavement is on the northern edge of the City at Moogate Street, and the conduits were found barely 4ft below the surface. The trunks proved to be in a wonderful state of preservation. They had been hollowed out to a bore of 6in or 8in, the trees in some cases being from 4ft to 6ft in girth. One end of each length had been pointed to fit into the hollow of the next, some of the trees being 20ft or more in length. There is an opinion that they must have been 150 years in the ground.

## Schedule of the Fruit Show at the Crystal Palace.

From this, intending exhibitors learn that by giving the R.H.S. three days notice, they can get their exhibits unpacked and staged if sent before September 18, but to their removal and return they must attend themselves. The only vegetables exhibited will be Tomatoes and Cucumbers. Fruit and Flowers are not to be combined in one exhibit. Groups of decorative plants and flowers will receive no awards. Care should be taken that each fruit retains all its natural bloom. None may be polished. Errors in naming do not absolutely disqualify. Each dish must contain only one variety. All fruit for prizes must have been grown in the British Isles. "Grown in the open air" means that the trees have both flowered and "set" their fruit out of doors.

## Royal Horticultural Society of Aberdeen.

The arrangements for the annual flower show under the auspices of the Royal Horticultural Society of Aberdeen, which takes place this month in the Central Park, Kittybrewster, which the society has not visited since 1892, have now been completed by the secretary, Mr. J. B. Rennet, advocate, and given good weather, the exhibition promises to be in every way a conspicuous success. The show is, as formerly, to extend over three days, namely, Thursday, Friday, and Saturday, 21st, 22nd, and 23rd inst., and besides the exhibition of flowers, fruit and vegetables, the society will have as an additional attraction the band of the 1st Aberdeenshire R.G.A. (V.), under Bandmaster Wood, and the Oakbank Boy Pipers, while in another part of the park White's carnival will be in full swing during the three days of the show. A new departure this year, suggested to the directors by the facilities afforded for such an event by the Central Park, will be the holding of pony races, donkey races, and a competition for the best pony turnout. The opening ceremony will be performed by Lord Aberdeen, under the presidency of Sir Allan Mackenzie, Bart., of Glenmuick, chairman of the directors.

## Planting a Coronation Oak.

On Monday, an Oak tree, graciously given by the King, was planted in the public part of the Home Park of Windsor Castle by Mrs. Mitchell, the Mayoress, to commemorate the Coronation. The Mayor and Mayoress afterwards held a reception at the Guildhall.

## United Horticultural Benefit and Provident Society.

The monthly committee meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday evening last, Mr. Thos. Winter in the chair. After the minutes of the last meeting were read and signed, four new members were elected and one nominated. Five members were reported on the sick fund, and two others had been on and off the fund since the last meeting. The secretary was instructed to make the preliminary arrangements for the annual dinner, to be held early in October next.

## The Late Mr. William Miller.

After a long and painful illness, the death occurred on Saturday of Mr. William Miller, of Speen. He succeeded his father many years ago in business as a nurseryman and florist, and was widely known in the district. On many occasions he officiated as a judge at the annual exhibitions of the Newbury Horticultural Society, and at this year's show sympathetic reference was made to his long connection with the Society. The funeral took place at Speen churchyard on Wednesday. The Horticultural Society was represented by the hon. secretary (Mr. C. H. Stradling) and his assistant (Mr. J. W. H. Kemp), and a wreath was sent by the committee.

## Kirkbean and District Show.

This local show, held at Carsethorn, Kirkcudbrightshire, on August 7, was the most successful of the series since the formation of the society five years ago. The horticultural entries were rather larger than last year, and the cut flowers were remarkably good for the earliness of the date, and the backward character of the season. A splendid feature was the table of pot plants and cut flowers sent by Mr. Houlsiton, gardener to Colonel Blackett, of Arbigland. It was superior to anything he has previously shown, and was deservedly awarded an illuminated certificate and a medal by the judges. Mr. S. Arnott, one of the joint secretaries, was also awarded a certificate for new, rare, and remarkable herbaceous plants. In the horticultural department the most successful exhibitor was Mr. R. A. Austin, Mainsriddle; the other leading exhibitors being Mr. J. Briggs, Preston Mill, Dumfries; Mr. Robson, Chapelgrove; Mr. Joseph Robson, North Carse; and Mr. R. Major. The principal prizes were handed over by Sir M. J. Mount Stewart, Bart., M.P., who made an interesting little speech.—A.

## Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, August 19, in the Drill Hall, Buckingham Gate, Westminster, 1 to 5 p.m. A lecture on "Horticultural Education and Teaching in England" will be given by Mr. W. H. Patterson, F.R.H.S., at 3 o'clock. At a general meeting of the Royal Horticultural Society, held on Tuesday, August 5, eleven new Fellows were elected, making a total of 870 elected since the beginning of the present year. The Royal Horticultural Society will hold a special exhibition of Dahlias on September 2 and 3 in conjunction with the National Dahlia Society, in the Drill Hall, Buckingham Gate, S.W. At this meeting only Dahlias can be shown—with the exception of flowers, fruits, &c. for certificate. All Dahlias, including those shown for certificate, must be left on exhibition until 5 p.m. on the second day, but other plants may be removed as usual. For schedule of prizes see "R.H.S. Book of Arrangements for 1902," pages 91 to 93, or separate schedules can be obtained on application to either Mr. J. F. Hudson, M.A., Gunnersbury House Gardens, Acton; or to Mr. C. E. Wilkins, 19, Lyndhurst Road, S.E., joint secretaries to the National Dahlia Society. Intending exhibitors at the Crystal Palace Fruit Show on September 18, 19, and 20, can obtain an official entry form, together with schedule, on application to the Secretary, R.H.S.; 117, Victoria Street, S.W. (a penny stamp should be enclosed). Entries for this show close on September 11.

**An Aloe in Flower.**

In one of the enclosures in Parliament Hill Fields, near Highgate Road, there is now to be seen an Aloe in full bloom, and the rare sight attracts a considerable amount of attention. In this country, even in greenhouses, the Aloe does not flower until it reaches an advanced age, whence arises the gardeners' fable of its flowering only once in a hundred years.

**Cider as a Drink.**

It appears that there are ciders and eiders. Some are free from acid and sugar, and being of a low specific gravity are suitable for gouty people, and are adapted for everybody. The other class of ciders, sweet in character, are not at all beneficial or healthful. "Rough eider" is the beverage to be commended. The sweetened eiders and those termed "champagne" brands should be avoided.

**Newabbey, N.B.**

This energetic society was not so well supported as usual in the way of entries, and, consequently, their show on August 9 was not so attractive as usual. The leading feature of the show was the pot plants, the Begonias and Petunias being the best. In the open class, Mr. W. Carruthers, Shambellie Gardens, had it practically all his own way with cut flowers, his hardy flowers being especially good. His Begonias were the finest he has yet shown here. Miss Wilson, Newabbey Manse; Mr. E. McCurrach, the Schoolhouse; and Mr. W. Bell and Mr. J. Waugh, Newabbey, were among the other leading prizetakers. The vegetables were good for the season.

**Tea Under Cultivation**

In India and Ceylon at recent periods, together with the crops produced, based on official records. In 1890 there were 344,800 acres under cultivation in India and 250,000 acres in Ceylon, India producing 112 million pounds of Tea, and Ceylon 47 million pounds, the total crop being 159 million. In 1895, with a cultivation in India of 415,700 acres and in Ceylon of 305,009 acres, the respective crops were 143 and 93 million pounds, total 241 million pounds. In 1900 the cultivation was in India 522,000, and in Ceylon 384,000 acres, producing 197 and 148 million pounds of Tea respectively, or a total of 345 million pounds. The average annual increase in the Indian crop for the last ten years has been  $8\frac{1}{2}$  million pounds, and in that of Ceylon 10 million pounds. The home consumption for British-grown Tea for the last calendar year—1901—was 238 $\frac{3}{4}$  million pounds; the consumption in foreign markets and ship stores 95 $\frac{3}{4}$  million pounds, making together 334 $\frac{1}{2}$  million pounds.

**Echoes from Hamilton.**

Yet another month of few redeeming points has passed away from the stage of time which brings us now face to face with the realities of autumn, and still but little prospects of the summer. As we write (7th) the elements are as uncongenial as well could be, without the actual presence of frost or snow. The last two days have been phenomenal August weather. On both the clouds were exceedingly angry and surcharged with moisture. This scene was intensified by a sweeping semi-gale of east wind, all very unlike the ideal month of August. This has been much the nature of our weather throughout in these north-western climes, with the result that most things have suffered considerably. Strawberries and small fruits are both late and poor. Apples, Pears, and Plums are not only scarce, but the quality is indifferent. Lord Suffields and Stirling Castles have scarce reached the size of fairly grown Walnuts! and forcibly remind one of the samples one sees from an Areadian garden. Vegetables generally are good, though a trifle later mayhap than usual. Hay crops are heavier, and altogether better than were at one time anticipated. Cereal crops, too, are heavier, but still quite green. Grazing is good, and has pulled up immensely, though long in moving in the earlier part of the season. Farmers and gardeners, on the whole, are, notwithstanding the general backwardness of things, fairly contented. In the department of the forester there also appears to be little calling for serious grumbling. Young plantations are making wonderful growths. We measured young Norway Spruce growths over 18in, and Rhododendrons, which is not probably so good, are making incredible growths, too much to guarantee abundant bloom next year.—D. C.

**The Scottish Summer.**

The enervated Southerner, who is now languishing under the debilitating breezes of the North Foreland, will be pleased to hear that his Scottish brethren in the neighbourhood of Hawick have been enjoying 5deg of frost.

**Correction.**

We are requested to state that in our report of Leicester Show we described Mr. Amos Perry, who won a Gold Medal, wrongly as of Tottenham, and not as of Winchmore Hill, with which latter place he is now identified.

**The Hamilton Horticultural Association.**

At the monthly meeting of the Hamilton Horticultural Association, Mr. MacMillan, head gardener, the "Orchard," Hamilton, read selections from the *Journal of Horticulture*, which were very much appreciated, and for which he was accorded the cordial thanks of the meeting. The president, Rev. Mr. Paterson, was in the chair.—D. C.

**College of Agriculture, Downton, Salisbury.**

The twenty-second summer session of this college ended on Friday with the usual distribution of certificates and prizes. Professor Wrightson presided, and in his address spoke of the connection between Nature-study and agriculture, especially as regarded trees (forestry), grasses, animals, both useful and predatory, insect attacks, and weeds. He also commented on the attention of their American and Australian students. The following is a list of the prizemen:—The Bles Scholarship of £10, given to the best man who has completed one year, F. G. Bateman, of Somerset Road, Ealing, W. The diploma, given to two years' residents who pass in all subjects taught at the college, J. C. Thompson, of Knighton House, Leicester; A. J. H. Wrightson, of the College of Agriculture, Downton; F. R. Kelly, of Ballantlea Park, co. Clare, Ireland; N. D. Stewart, of Bryntirion, Vaynol Park, Port Dinorwie, North Wales; and C. Crowley, of Banghurst Rectory, Basingstoke.

**July Weather at Belvoir Castle.**

The prevailing direction of the wind was W.; total eleven days. The total rainfall was 1.24in, this fell on eleven days, and is 1.58in below the average for the month; the greatest daily fall was 0.28in on the 25th. Barometer (corrected and reduced: highest reading 30.302in on the 2nd at 9 p.m.; lowest reading 29.305in on the 26th at 9 p.m. Thermometers: highest in the shade, 81deg on the 14th; lowest, 39deg on the 25th; mean of daily maxima, 66.93deg; mean of daily minima, 49.83deg; mean temperature of the month, 58.33deg; lowest on the grass, 35deg on the 25th; highest in the sun, 131deg on the 16th; mean temperature of the earth at 3ft, 57.96deg. Total sunshine, 162 hours 30 minutes; which is 30 hours 12 minutes below the average for the month; there were two sunless days. The mean temperatures are the lowest we have had in July for several years.—W. H. DIVERS.

**Meteorological Observations at Chiswick.**

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.            | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|                  |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                  |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.<br>August. |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ... 3     | W.S.W.             | deg. 60.7               | deg. 55.9 | deg. 67.0 | deg. 53.9 | Ins. 0.03   | deg. 60.6                             | deg. 59.5      | deg. 57.5      | deg. 48.6                    |
| Monday ... 4     | S.W.               | 55.5                    | 54.0      | 67.3      | 51.7      | 0.07        | 60.3                                  | 59.5           | 57.5           | 48.3                         |
| Tuesday ... 5    | W.S.W.             | 64.1                    | 59.1      | 72.0      | 54.0      | 0.17        | 61.8                                  | 59.7           | 57.5           | 51.5                         |
| Wednesday ... 6  | S.E.               | 61.6                    | 60.8      | 68.0      | 58.5      | 0.61        | 62.7                                  | 60.2           | 57.5           | 51.4                         |
| Thursday ... 7   | S.W.               | 63.7                    | 60.2      | 69.8      | 54.2      | 0.02        | 61.8                                  | 60.3           | 57.5           | 46.2                         |
| Friday ... 8     | W.S.W.             | 61.9                    | 58.3      | 67.4      | 57.9      | 0.02        | 62.8                                  | 60.5           | 57.7           | 51.5                         |
| Saturday ... 9   | W.S.W.             | 56.6                    | 52.2      | 60.6      | 48.2      | 0.02        | 61.0                                  | 60.6           | 57.8           | 41.9                         |
| MEANS ...        |                    | 60.6                    | 57.3      | 67.4      | 54.1      | Total. 0.94 | 61.6                                  | 60.0           | 57.6           | 48.4                         |

The weather during the past week has been dull and cold; rain fell every day, and was very heavy on the afternoon of the 6th.



## The Petunia.

The Petunia is a general favourite with horticulturists of moderate ambition and limited resources, and figures prominently at this season in every garden. The name petun is the Peruvian for tobacco, there being a close connection between the Petunia and the Nicotiana. Though now so popular, the introduction of the Petunia is of recent date compared with that of many flowers having a much more limited diffusion. It will scarcely occur to admirers of this thoroughly naturalised flower that it is a native of the Pampas of Buenos Ayres, and that its presence in England was unknown within the memory of a few persons now living, it having been introduced seventy years ago.

One peculiarity possessed by the ordinary known florists' varieties is the facility with which they develop seeds, varying in character from that of the parent plant, and giving origin to a considerable complexity of markings as may be seen by referring to our illustration. Both double and semi-double varieties are there represented. The best forms, though originally raised from seeds, are perpetuated by cuttings of young flowerless shoots in a close warm case or frame in early autumn or spring; but beautiful varieties for garden and greenhouse decoration are obtainable from packets of seed from a good strain, such as supplied by Messrs. Barr, Sutton and Sons with others. Excellent plants are raised by sowing thinly in fine soil in pots or boxes in August, the soil to be kept uniformly moist, and the seedlings transplanted as soon as possible in other pots or boxes to become sturdy before the winter, through which they will pass safely on a shelf suspended from the roof of a frost-proof greenhouse. Plants are also easily raised by sowing in a warm frame in the spring.

## Insects as Garden Adornments.

It is but a word of three letters, one of the briefest our language contains, yet "fly" means a great deal that is very unpleasant to the gardener. Apart from its designation of those insects, the entomologist considers the flies proper, it is given to sundry members of the aphid group, justly regarded as amongst the most formidable enemies to horticulture, and which must be kept in check by constant watchfulness. Many flies do mischief to flowers and fruit when in the winged state; others, in the larval condition, are even more persistent, inflicting damage on roots, stems, and leaves which is often undetected till too late.

Still we have a set off; some species of flies are useful scavengers, and others of predatory habit kill various insects that we are glad to see diminished in numbers without exertions on our part. Then there are flies, frequenters of gardens, whose tints in the summer sunshine are really beautiful, their adornment and their rapid flight imparting animation to the scene as they regale themselves upon the flowers.

Though we must grant the noise several species make is not agreeable on a hot day, their sonorous buzzing is indicative, we may presume, of the satisfaction they find in their brief winged life, for it is possible to discriminate amongst insect hums or buzzes—notes of pleasure, of anger, and of alarm. Flies of noisy habit that are occasionally seen in gardens are the breeze flies, one of which was brought me the other day as a curiosity. They are showily marked in black, yellow, and grey, having wings with many nervures, and a long proboscis, applicable for blood sucking, in the female insect certainly, hence their loud buzzing is a warning to look out; but the male flies are mostly satisfied with the juices of flowers. These breeze flies are Tabani, dreaded by cattle on pastures, also by horses. The eggs are dropped, it is thought, amongst the herbage, and the young grubs burrow in the soil, living upon roots. Better known to the gardener is the common chameleon fly, akin to these, named from its diverse colours, and a useful species, since it preys upon other insects, some of them being garden pests. *Stratiomys chamæleon* has a broad body, long antennæ, a spiny thorax, the ground colour black, spotted and streaked with red, yellow, and white. In its juvenile stage this insect leads an aquatic life, the grub floating along shallow streams, breathing by means of a telescopic tail.

This species is a good example of the family of soldier flies, presumably named rather from their red markings than because of their warlike habits; though some, like the chameleon fly, attack smaller insects they meet with at flowers, while also partaking now and then of their juices. Several of the larvæ or grubs feed on decaying substances, and are therefore of service to us. In the genus *Sargus*, the flies are slim bodied and of beautiful metallic hues. About this time *S. cuprarius* is on the wing where flowers are plentiful; it has a golden green head, and the body is lustrous purple. They are not particularly pretty, but from their habit of haunting flowers, upon which they walk in a sluggish way, we cannot help noticing the *Acroceras*. These little flies have a curiously swollen body, and a head so tiny that it seems only just to hold the eyes and the short antennæ.

It is unfortunate that few of the familiar flies have received English names, and we cannot find one for our friends in the genus *Asilus*. Strong winged, muscular flies these, abundant in woods and along roads, making an occasional excursion into gardens for variety of prey. Nothing comes amiss to a hungry *Asilus*, as one of them will attack a relative, and despite its being armed with a sting, an *Asilus* can conquer a bee. Mr. Staveley has often noticed such a fly carrying a bee larger than itself. Surely, he remarks, he must be going to a picnic, or why should he not at once dine upon what he has got! Somebody else remarked that these flies have a hungry look; they are long bodied, often hairy.

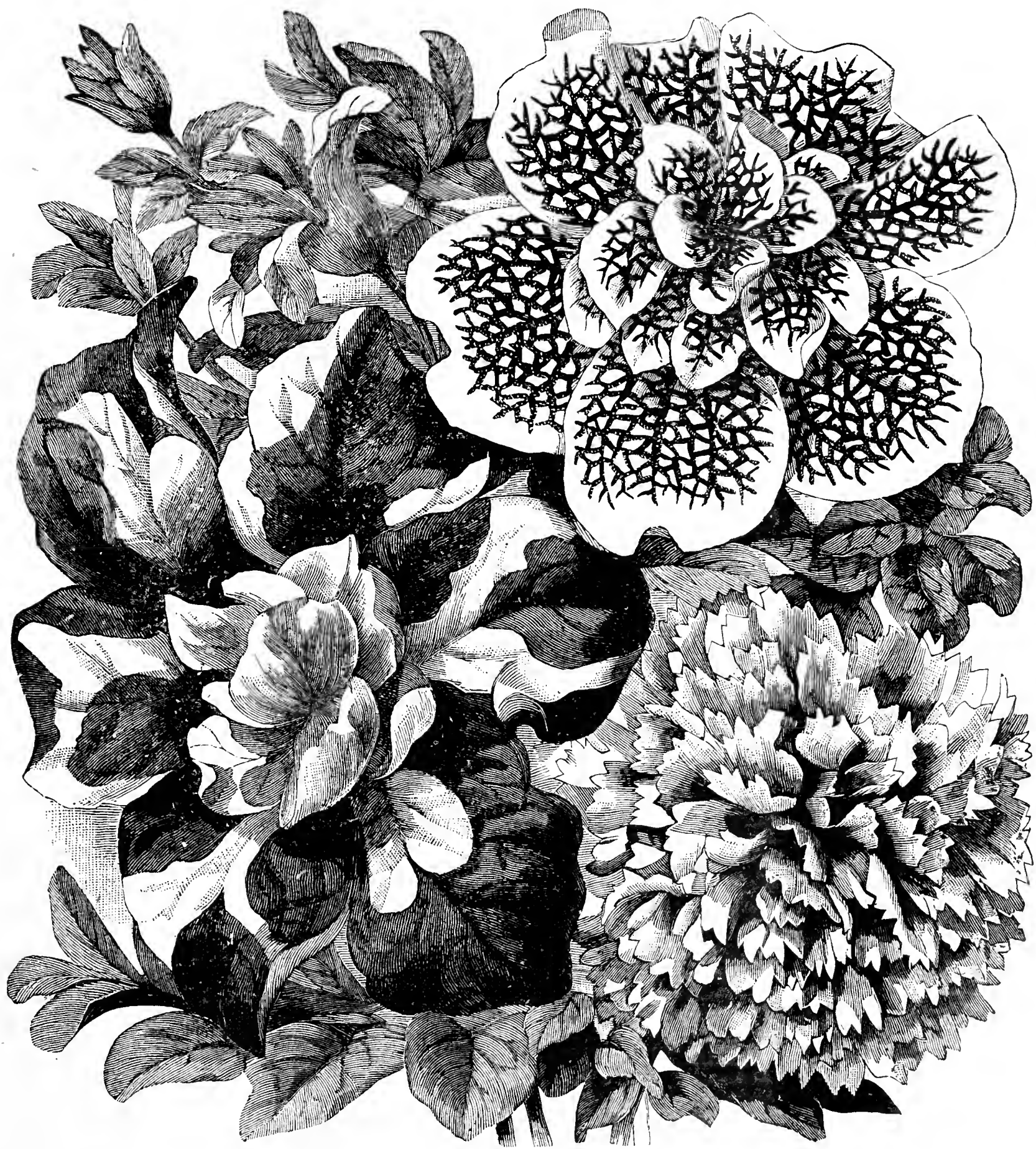
One common species, *A. crabroniformis*, seems to have taken its name from a slight resemblance in aspect to a hornet. It is a handsome fly, clothed with deep golden hairs all over, except a part of the abdomen, which is velvety black, the wings rich brown, showing a few darker patches. It is reported to be a great destroyer of caterpillars, sucking their juices. The larvæ of *Asilus* live underground, or in decaying wood. We associate with these flies the smaller species of the genus *Empis*, sometimes called snipe flies; their legs are long, and the tongue is like a bird's beak. They are useful to us, as preying upon crane flies and other troublesome species; some of them during the summer clear off thousands of the leaf-roller moths, whose caterpillars disfigure many garden trees and shrubs. Towards evening the snipe flies may be observed flying in parties, most of which are rather dull coloured, and they are not particularly vocal.

Pass we now to other notable garden flies, which have often been mistaken for bees, or even for one of the bee-like hawk moths, as was instanced by sundry notes upon some specimens that were published during the spring in this Journal. Indeed, several of the bee flies do resemble the humming bird moth, since they hover about a flower without settling, the long proboscis being used to extract the honey. Again, they dart off suddenly while suspended in the air, and you can scarcely tell to which direction, they having moved so swiftly. A bee fly, even in repose, keeps the wings at full stretch; the antennæ is long and slender, as well as the proboscis, and in habit they are pacific, leaving other insects alone.

We have a good example of the family in *Bombylius major*, the fiery garb seeming to suit its appearance before the summer heat has arrived. Its black body is adorned with golden hairs above, and beneath they are black and white, the broad body being topped by a small head. Allied to the bee flies is a rather remarkable species, called *Anthrax sinuata*; it has a short proboscis, is less hairy, and owns ample wings. This, too, is a flower lover, it often frequenting the Hawthorn and the Honeysuckle. It is not brightly coloured; but, as a French naturalist says, the appearance of the fly resting on a flower is a pleasant contrast to the eye, caused by the velvety black body and the variegated wings, upon which black and white are well defined.

Again, in the large family of the *Syrphidæ* we have flies which neither as a group or as individuals can claim popular names. Yet they are familiar objects about the garden, some large, some small, we see them from spring to the close of autumn. Most of them have a head which seems all face, being flat behind, the tongue large, usually bent in the middle when the insect rests. Many exhibit metallic heads, with black and yellow bodies, but there is great diversity of colour, some are sombre grey, most having some tints of yellow, red, or white. Several species hover curiously above flowers, undulating from side to side. All of them are lively flies, their wings glancing in the sunshine adding to the brightness of the day, nor is their musical hum at all disagreeable. While grubs, those in the genus *Syrphus* are diligent destroyers of the aphid, others feed upon decaying roots and dung, and a few live parasites in the nests of bumble bees.

Then we have about gardens hosts of tiny flies, which may sometimes tickle our faces, but are both pretty and active. For example, the abundant *Cecidomyzæ*, having wings of rainbow tints and mostly long antennæ, occur upon plants of every kind. —ENTOMOLOGIST.



PETUNIAS.





#### **Chrysanthemum Christmas Glory.**

This is the name of a new variety raised by Mr. Dyer, Frimley, and is likely to be useful as a late one for the supply of cut flowers. The colour is crimson, and it keeps the tint well. It has a good stem and a dwarf habit of growth. The blooms are of medium size, and the form elegant. It is difficult at this time of the year to obtain Chrysanthemums of bright colour; any novelty to supply that want is therefore welcome.

#### **Chrysanthemum Mons Freeman.**

This variety is another instance of a good thing being discarded before its real qualities are known. At least, it is now useless as a show kind, because small for present day requirements. Ten years ago blooms of it looked well on the stands, but as a late flowering variety with pink blossoms it is first-rate. The formation of the flower is excellent, and the colour very bright and pleasing. Add to this a dwarf, free-branching habit of growth, with a stem stout enough to hold the bloom in position, whether a central blossom or a side one. We are apt to rush after novelties in flowers when oftentimes the material is already at hand to grow for a special purpose, and this kind can be recommended as a late pink.

#### **Chrysanthemum Matthew Hodgson**

Is becoming a popular variety for late flowering. It is excellent for the purpose. The blooms have the necessary qualities as form, which is the Japanese; and they always come double; however many are allowed to develop. The stiff stem is not the least of its merits. In colour the shade is terra-cotta of a crimson hue, and this keeps bright to the last. The habit of the plant is first-rate, dwarf, sturdy, and with abundant foliage. Those who grow for market, as well as gardeners in private establishments, should make this one of the principal varieties for the growth of late cut flowers. The plant lifts well, which to the former class of cultivators is an item of importance; and the thick, leathery leaves are more free than most kinds from the attacks of "rust." This variety did not last many seasons as a sort for exhibitions, because wanting in size for that purpose; hence many have discarded a really good thing.—H. S.

#### **Japanese Varieties.**

During the course of the last winter session at a crowded meeting of the Dulwich Chrysanthemum Society, Mr. Taylor, gardener at Tewkesbury Lodge, completed the paper on Chrysanthemum growing, which he had previously brought up to the stage of placing the plants in their summer quarters. Time pressing, he confined his remarks to the Japanese section. His regulations were to keep the plants syringed overhead until the end of August, after which, the night dews will probably be sufficient; tie out shoots carefully, but not too tightly; remove all weeds, and give careful attention to watering, never giving any water unless the pot rings when tapped with the knuckles, always erring on the dry side. About the first week in August a dressing should be given, which should include one part bonemeal in five of soil. Watering with a rose should be done for a time after top-dressing. Before the leaves assume a yellowish appearance, follow with liquid manure from horse droppings and soot of about the colour of pale ale, carefully avoiding any deposit on the soil. This should be followed after a fortnight by a chemical manure, or Peruvian guano, whenever watering is required. The guano is specially useful in wet weather, when it may be sprinkled on the soil instead of being used in the liquid state. Slightly increase the strength of manures as the buds unfold, until they are three parts out, after which, give clear water only. Keep a sharp look out for insects, keeping down aphides by tobacco powder or solution.

Catch and kill earwigs by the use of pots on stakes is not advisable, as they are liable to slip and break shoots. Early morning is the best time to examine the plants for their various enemies. Mildew is sure to appear, and should be checked by dusting with sulphur or by using Molyneux's lime and sulphur solution. Rust is not troubling growers much yet this season.

#### **Taking the Buds.**

Taking the bud is the next consideration, and amateur beginners are recommended to "take" their buds earlier than

they usually do. All buds, with the exception of those of the Vivian and Morel family should be taken by the third or last week in August, and even these should be secured by September 1. To obtain buds in some varieties, it is necessary to pinch in April, thus causing an earlier break, while others, Phœbus for instance, should develop naturally at the right date if struck in January. Mrs. Weekes, Florence Molyneux, and Edith Tabor do well if struck late in March, and the first bud secured. In a large collection recently seen at Brighton, and grown for an exhibition to be held about November 12, bud selection was well in hand at a much earlier date than is usually recommended. Some growers find that the blooms on buds taken late develop too early, but an earlier bud takes so much longer to unfold its many petals, that the remedy is rather in taking early than late.

The next consideration is housing the plants, which should take place about October 1, although consideration of the weather must be shown. The house should be made sweet and clean, and the plants carefully gone over for mildew. For the first week air should be given whenever possible, and the syringe used lightly early in the day if the weather is bright. Fumigate on alternate nights; after this, fumigating once a week will keep down aphides. Other pests should be caught and killed. Slight shading is beneficial when the blooms are unfolding. If it is found that a plant will be too early for the show, remove to a dry dark room and water as little as possible; or the blooms may be cut, the stems stripped of leaves and placed in bottles. Should a plant be backward, keep it in the warmest part of the house.

#### **Cutting Blooms for Exhibition.**

When cutting blooms for the show leave about 18 in stem, and even when placed in their cups leave an inch of stem to enable any necessary dressing to be done at the show. Take care no duplicates appear where distinct varieties are required. Arrange the blooms in a pleasing contrast of colour, say Phœbus against Wm. Steward, and Mrs. G. W. Palmer by the side of Edith Tabor, never putting two of one colour together. When on the exhibition table raise the back row of blooms as high as the cups and tubes will allow. Place the second row just above the bottom florets of the back row, and the same with the front. Adjust the name cards and the class card in their proper places.

Beginners are strongly recommended not to enter too many classes; to send in their entry in good time; carefully follow the directions and regulations in the schedule; set up in good time their exhibits, and to accept in good grace the verdicts of the judges. A good discussion followed, many little difficulties being carefully elucidated by Mr. Taylor.

## **The Cape Town Exhibition.**

The scheme for holding a British and Colonial Exhibition at Cape Town for a period of four months from November, 1903, to February, 1904, is making definite progress. The patronage of Lord Milner has been secured, while the support of other distinguished men and public bodies has been enlisted. The reception accorded to the project is evidenced by the support of the Cape Town Chamber, while similar support, or promises of support, have been received from other Chambers and merchants in the main cities of the several South African colonies. A like cordial reception has, we understand, been met with in this country, and even in our most distant colonies. The Chamber of Commerce and the Town Council of Cape Town, representing the leading merchants and business men at the Cape, are to appoint an Advisory Board, in order to forward the arrangements and interests of manufacturers participating in the exhibition. The site upon which the exhibition is to be held has already been chosen. It adjoins the Botanical Gardens, and is within five minutes' walk of the Town Hall. The contract for the construction of the necessary buildings has also already been signed. The number of applications for space from British and colonial exhibitors is already large, and probably before long the whole of the available space will have been applied for. The time fixed for holding the exhibition is certainly very opportune. The various paralysed industries, and especially those of farming, dairying, wine growing, will then be busy in schemes for a fresh start, and the tangible and visible exhibition of the latest and most up-to-date appliances, tools, mechanism, and machinery, cannot but lead to very extensive and profitable dealings, and the opening of new trade outlets. Following the good example of the Canadian Government in the process of buttressing the Empire with solid colonies, this effort to stimulate development to the South as well as the North may, we hope, be eminently successful.

## Gardening Literature.

The horticultural literature that has served as the source from which I have drawn here is that dating between the years 1826 and 1840. From the advertisements and notes of the editors, or conductors, as they termed themselves, there seems to have been plenty of gardening publications at that time. A few of them I may mention, namely, "The Floricultural Cabinet and Florists' Magazine," "Gardeners' Magazine," "Botanical Register," "Botanical Cabinet," and the "Transactions of the Horticultural Society" (which was not termed Royal in those days). Among these my notes are principally taken from the Horticultural Society's Transactions, the "Gardeners' Magazine," and the "Floricultural Cabinet and Florists' Magazine." The title of the last-named did not give entire satisfaction to its subscribers. One correspondent says: "I do not like your first title. What has a cabinet to do with a flower garden? The second title (the "Florists' Magazine") is preferable. I do hope you will confine it to the latter title." Also he adds: "If your correspondents are too luxuriant, you can easily apply the pruning knife." It would appear that the conductors did not find it necessary to apply the pruning knife very often, as the articles sent in were evidently very short, and if they had pruned them to any extent there would have been very little to print.

The number of subjects dealt with seems to have been limited. Month after month I find the same subjects treated upon. Dahlias, or Georginias, as they were called, was a favourite subject, and the long lists advertised in the various publications must have been a source of profit to the publishers, and also to the growers, judging by the prices asked for some of them. Carnations, Pinks, Ranunculus, and Pansies, &c., were favourite subjects. Also tours through France and Belgium, and visits to some of the notable gardens in England and Scotland, occupy a large space, and, judging by the remarks made by the tourists and printed and spread abroad, must have caused a good deal of heart-burning amongst the gardeners, and also the owners, of these various gardens visited. A spade was called a spade in those days. In all the notices of visit to different gardens (private) that have appeared in recent years, I have never seen anything so outspoken. I have no doubt some of us have been astonished at the reports of places with which we are acquainted; but when it comes to public places or gardens visited, then criticism is more freely indulged in, and some of us get a good mauling at times, as perhaps we deserve.

Dahlias were in those days great favourites. A note says that they were named after a Swedish botanist (Professor Dahl), and must therefore be pronounced dal-ya. The result of one man's observations is that it thrives best in soil of a sandy nature (good news for us). Another says a stiff clayey loam will, to a certainty, produce the finest flowers, though probably not in such abundance. Its propagation is freely discussed, and one point worthy of notice is in striking cuttings, not to cut out the eyes, or buds, in cutting off the leaves at the base of the cuttings, although it will grow and flower equally as well if they are cut out. It has been found that they failed to start into growth the following year.

One man found that peat mould such as Heaths grow in materially tends to the development of stripes or spots in such flowers as possess these properties, mixed with the soil in the bottom of the hole. Great care was taken of the roots at lifting time, leaving plenty of soil on them; and even putting them in sheds on shelves where there are fires to dry them gradually.

The blue *Hydrangea* exercised the minds of many inquirers, and various recipes are given to change the rose colour to a blue. A twenty-fifth part of iron filing in loamy soil would change the colour, but the flowers would not be so large. Another way: In autumn shake off all soil in which they were growing and pot in bog earth, and if a little well decomposed night soil is mixed in the bog earth, is more certain of producing the blue flowers. And even one correspondent said that his late father had a method of producing

yellow flowers by using strong sulphur water, or some other chemical process, but which is not stated.

The decay of Mignonette plants in full flower was the cause of much complaint and also inquiry. But I did not find any satisfactory solution in subsequent notes. They seemed to be successful in growing it in pots, to flower during the months of winter and spring. Here is an original article in full. "Sow the seeds in 48 sized pots, with their bottoms well drained, in a compost of leaf mould, mellow loam, and river sand. Plunge in a frame having them near the glass, and when the plants are about 1in high, thin them out to six or seven in a pot. Give air when not frosty, but keep the lights closed in severe weather. At all times (except when the plants are in bloom) water them with caution. To flower in November and December sow August 12; to flower in January and February sow August 26; to flower in March and April sow September 6." Had the pruning knife been applied to this article, there would certainly not be much of it left.

Chrysanthemums were certainly not so well known and grown by our great grandfathers as now. The following is an article published in June, 1833, by A. H. Haworth, Esq., F.L.S., &c., author of "Synopsis Plantarum Succulentarum, Narcissinearum Monographia," &c. It was first published in the "Gardeners' Magazine," and by permission afterwards copied in the "Floricultural Cabinet."

Time and space will only allow a few jottings of this article. He was a prophet, was Mr. Haworth, for he says they are well worthy of all the care and attention we can bestow upon them. And they will hereafter, through the medium of their very sportive seeds, become far more numerous, more various, more beautiful, and more attractive. (This is good.) He says: "I possess (alive) several other reputed varieties, but these I refrain from mentioning. I recommend their voracious and very fibrous roots to be parted in autumn or early spring, and planted in very rich manured light soil, at the foot of a south or west aspected wall, with not more than one, two, or three branches from each root, trained to the wall as regularly and as thinly as a Peach tree, cutting off all superfluous shoots and weak lateral flower buds. Thus treated these conspicuous plants will reach the height of 3ft or 4ft in the smaller sorts, and 7ft or 8ft at least in the taller kinds, terminating in abundant and most beautiful flowers, many of which will far surpass 5in in expansion, and with almost every colour, except deep scarlet and the tints of blue."

Mr. Haworth is not allowed to have all his own way, and is criticised by "Iris" in a subsequent article, who gives his views on growing them in pots, and who evidently knows a thing or two, for his last words are, as for the plants in pots, top-dressing is very beneficial.

Another correspondent gives his views on the way he obtains fine dwarf plants from 12in to 18in high. This ought to be a good hint to exhibitors, who often find it difficult to find plants dwarf enough to finish off their groups. His *modus operandi* is, early in May plants are plunged out in the open border, fully exposed to the sun, and well supplied with liquid manure, so as to get strong shoots by the middle of September. These shoots are bent down and laid into pots called small 48's. They very soon emit roots, and when established, disengaged from the parent plant, and placed in pits or frames.

"J. K." says: "In September tie some moss and mould round the stalk tight at the height you require, and in a fortnight roots will strike to the moss, and may be severed and potted in the usual way."

Double flowering Stocks. Many of us have erroneous ideas how such a large percentage of double flowers are procured from the single varieties from which the seed is saved. But "Paul Pry" lets us into the secret how it is done. Select those plants for seed that have more than four petals to each flower, and destroy those having only four. Sometimes plants will have flowers with six petals, or even more, and his views are confirmed by another contributor in a subsequent number. Noticing the word *Wiseton* reminded me of the *Schizanthus Wisetonensis* (twelve seeds, 2s. 6d.); but it proved to be an article on the *Gentiana acaulis*, by J. C. Hall, jun., Wiseton. I had always an idea that a strong soil was necessary for this plant, but Mr. Hall says different. They flourish with us in almost any soil (but prefer peat), so that is good news for us in this locality.—J. B. S.

(To be continued.)



## Gardeners' and Farmers' Friends.

Amongst the numerous feathered friends of the gardener and farmer—the different species of the family of Strigidae—the owls certainly occupy a prominent position, so far as their limited extent will allow, their narrowed limit being due principally to the prejudice of the game preserver, who wages an incessant war of extermination against them and all other birds and animals of prey, not without, however, some little cause for justification, considering that such as the owls and the hawk tribes do indeed occasionally indulge in a “titbit” in the shape of a young partridge or pheasant for the delectation of their young during the breeding season; but this is more than compensated for by their destruction of vermin, such as mice, moles, rats, and night-flying moths.

Apart from their utility there are no more interesting members of our wild feathered fauna than the owls, whilst at least two of the species, the barn owl (*Strix flammea*) and the brown or tawny owl (*Syrnium aluco*), may claim to be “domestic” owls, from their frequenting and breeding near the habitation of mankind. Remarking upon the folk lore of the owls, an ornithologist writer remarks as follows: “The owls have in most ages been classed by the ignorant among birds of ill-omen. Yet it is a question whether any one encountering an owl for the first time, and as an unknown bird, would have any other feeling excited in him save that of the ludicrous. Its upright posture, round, flat face, strangely set ears, or horns, as we may choose to call them, large, staring eyes, always turned to the spectator with such unmeaning solemnity, are irresistibly comical; and our merriment is increased by the absence of all sympathy in the bird, which, in spite of its human cast of features, is neither angered nor amused by our laughter, but retains the same grave expression, making no sign of response. It was probably on account of its grave looks and seeming power of abstraction that the Owl was dedicated by the Greeks to the goddess Minerva, and honoured as the Bird of Wisdom.” This evidently refers to the “horned” section of owls, and not the “barn” and tawny owls. The so-called horns, or ears, are technically termed egrets, consisting of a tuft of feathers, possessed by such as the long-eared owl (*Otus vulgaris*), the scops-eared owl (*Scops aldrovandi*), and the short-eared owl (*Otus brachyotus*).

Some of the species are less nocturnal in their habits than the others. The short-eared owl, for instance, has been known to catch up chickens from the farmyard, and has been seen in chase of pigeons. The only specimen of the long-eared owl the writer ever saw alive was captured amongst the rocky hills in Westmoreland. The two species that he was most intimately acquainted with were the brown owl and the tawny owl, when resident many years ago in South Warwickshire. In proof of the boldness of the barn, or screech, owl in defence of its young, the writer once had a remarkable experience with the mother of a nest of young ones situated in the long and spreading branches of Ivy, almost encasing the tower of a dismantled ancient church in the grounds of the ancestral home of one of Warwickshire's most illustrious families. The Ivy-mantled tower and ruinous walls of the nave of the church in question afforded an excellent abode for such as owls, doves, house-sparrows, and starlings, and upon one occasion the aforesaid writer ascended a ninety-“round” ladder to inspect the family nest of a pair of old tawny owls, and when in the act of inspecting the “hissing” young and their well supplied larder, consisting of a mole, a sparrow, and two or three field mice spiked upon the ends of the decaying branchlets of the Ivy, also the curious large deposit of “pellets” of undigested feathers and fur, ejected apparently by both old and young, and which, in conjunction with the rejected bones of their prey, proved to be not of an over-savoury scent for one's olfactory organism—suddenly a sharp blow on the right ear was felt, and when quickly looking round to ascertain the cause, one of the parent birds was observed to fly off and settle in a neighbouring tree. It had evidently been roosting in an adjacent part of the Ivyed nave-wall watching, and, on hearing the cries and hissing sounds of the young, boldly attacked the enemy. One of its claws pierced a hole through the lobe of the ear, from which the blood freely dropped. Fearing another attack from the same quarter, the interested intruder elected to descend from the eyrie as quickly as possible, and not run the risk of having possibly

an “ear-dropper” hole unceremoniously made through the lobe of the left auricle.

Remarking upon the voracity of the barn, or white, owl, Mr. Waterton says: “The service which the barn owl renders to the agriculturist by its consumption of rats and mice must be exceedingly great, yet it is little appreciated. When it has young it will bring a mouse to the nest every twelve or fifteen minutes. But, in order to have a proper idea of the enormous quantity of mice which the bird destroys, we must examine the pellets which it ejects from its stomach in the place of its retreat. Every pellet contains from four to seven skeletons of mice. In sixteen months from the time that the apartment of the owl on the old gateway was cleared out, there has been a deposit of above a bushel of pellets.” Another authority avers that as many as twenty rats have been discovered at one time in the larder of a pair of barn owls. What has been remarked on the barn owl very nearly applies to the less common tawny owl, and which is an habitué more of the woods than the barn owl.—W. G.

## The Garden City.

The prospectus of the company has been issued, and £20,000 is asked in ordinary shares of £1 each, for the purpose of taking the initial steps in building a Garden City. Messrs. Ralph Neville, K.C. (chairman); Edward Cadbury (of Cadbury Bros., Bournville); T. H. W. Idris, J.P. (chairman of Idris and Co., of London, Southampton, and Canterbury); Franklin Thomasson, of Bolton; T. P. Ritzema, J.P., Newspaper Proprietor, Blackburn; Ebenezer Howard, author of the Garden City idea; and Aneurin Williams, the well-known co-operator. Among the subscribers are Mr. Alfred Harmsworth, £1,000; Mr. W. H. Lever, £100 to £1,000 as required; Mr. Geo. Cadbury, £1,000; and Mr. J. P. Thomasson, of Bolton, £1,000. The two last being conditional on the whole amount being raised. This company has been formed for the purpose of carrying into effect the scheme suggested by Mr. Ebenezer Howard, in his book, entitled “Garden Cities of To-morrow” (Swan, Sonnenschein and Co.), and to assist in relieving the congestion in crowded cities by the redistribution of the industrial population upon the land. Mr. Howard's scheme is, shortly, as follows:—The purchase of a large agricultural estate of, say, 6,000 acres, with the object of establishing a Garden City. The retention by the community of the Garden City of the increased value of the estate. The estate selected to be carefully planned under the best expert advice, so that as the town grows its factories and workshops, the houses of the people, the parks and open spaces, schools, churches, and other public buildings may be placed in the most convenient positions. The provision of a broad belt of agricultural land around the town, under such restrictive covenants as may secure to the inhabitants the enjoyment for all time of the combined advantages of town and country life, while the agricultural tenants may have a market for their produce brought to their doors. The scheme provides for the retention of a very large amount of open space for recreative purposes, and for the allowance of land for a fair-sized garden to each house. It provides for a population of about 30,000 people, protected against overcrowding by strict covenants. The method proposed is to form a company to acquire or purchase a site, and let land to tenants on building leases and otherwise. The first charge on the net profits of such company would be a cumulative dividend to the shareholders, but such dividend would be limited so as not to exceed a rate to be determined at the formation of the company, say, 4 or 5 per cent. Any remaining profits would be applied for the benefit of the inhabitants of the town and estate, who would also have the right collectively, after a certain period, say seven years, to purchase the undertaking of the company at par.

All wishing to promote this promising scheme should apply to the secretary of the Garden City Pioneer Company, 77, Chancery Lane, London, W.C.

## Potatoes in Germany.

While greatly improving the Potato the Germans have so increased the crop that new ways of disposing of it have had to be sought. They now feed about two-fifths to farm animals, and the alcohol makers are striving to increase the demand for their product. So much of the Potato is water that 3½ tons may be reduced to one ton by drying. The dried Potatoes keep so much longer and are so much more readily transported that those interested in the industry feel justified in offering 30,000 marks as a prize for the best process of drying.

## Societies.

### R.H.S., Scientific Committee, August 5th.

Present: Dr. M. T. Masters (in the chair); Messrs. Douglas, Hooper, Bowles, Saunders, and Baker; Dr. M. C. Cooke; Revs. W. Wilks and G. Henslow, Hon. Sec.

*Potato tumour*.—Dr. Cooke reported on the specimens sent to the last meeting, which were attacked by a fungus named *Chrysophlyctis endobiotica*, which has never yet been described, though the disease, Dr. Masters observed, was not uncommon.

Laburnum, from which a cluster of shoots of *Cytisus purpureus* had grown out. It appears that the tree was purchased some twenty-seven or twenty-eight years ago as a young grafted plant of *C. purpureus* on *C. Laburnum*. The scion grew very well for a year or two on the stock, till a strong shoot grew out below where the graft was inserted. This was cut off to save the graft, but the graft died quite out soon afterwards. The stock was left to grow into a Laburnum tree, which is now from 15 to 20 feet high, and as much in diameter. After some three or four years the *C. purpureus* made its appearance in various parts of the Laburnum, and is now to be seen in tufts all over the tree. A somewhat similar case is recorded in the "Gardeners' Chronicle" (1857, p. 382), by Mr. E. Purser,



*Rosa rugosa*. (See page 148.)

*Larch disease*.—This had been referred to as a fungus of the name *Allescheria laricis*, which was unknown to Dr. Cooke. It turned out to be merely a "MS." name only, with no description, and afforded no solution to the problem of the disease.

*Silver leaf disease*.—Dr. Cooke also reported upon this well-known affection of species of *Prunus*, which has been found by Professor J. Perceval to be due to a fungus, the hyphae occurring where the roots are decayed, which produced sporophores of *Stereum purpureum*. By inoculating healthy Plum trees with the sporophores, the silvery appearance was visible after eight or nine weeks. The infection appears to take place below ground.

A unanimous vote of thanks was given to Dr. Cooke for his three reports, which will appear in full in the Society's Journal.

*Influence of scion on stock*.—Mr. W. B. Latham, of the Botanical Gardens, Edgbaston, Birmingham, sent a bough of a

Clapham Park. He wrote, "Some few years ago three grafts of the *Cytisus* (purpureus) were inserted, and now the whole character of the tree is changing, and every year since losing the yellow flower of the Laburnum and producing the short purple flower."

*Cattleya and Lalia cross*.—Mr. Douglas exhibited a plant, *L. C. Juno*, Edenside var., being *C. Mossiae* x *L. majalis*. It is usually considered an invariable rule that hybrid Orchids betray the characters of both parents. The present plant, though an undoubted cross, was thought to be exceptional. A coloured illustration which Mr. Douglas exhibited of *C. Mossiae*, together with the plant, showed a degree of yellow in the throat, which was wanting in the living plant, *L. majalis* has a very spotted lip; but this feature was also wanting in the plant. That a cross or hybrid, though usually intermediate, may have one or other parent prepotent is well known; but the second generation, as



Dr. Masters observed, will often reveal the other parentage more completely.

*Gypsophila paniculata dimorpha*.—Mr. Henslow called attention to the fact that different plants of this species may have different kinds of flowers, being gynodioecious; that is, in some the styles are greatly elongated, while the stamens are abortive; in others the styles are much shorter and the stamens perfect. They spread outwards, and not inwards as in the case of self-fertilising plants.

*Dendrobium Dalhousianum synanthic*.—Dr. Masters exhibited a specimen (received from Mr. W. Potter, Beckenham) of two flowers coherent by their ovaries and the two adjacent sepals, all the other parts being distinct.

*Proposed investigations*.—Mr. Elwes wrote, in reference to the Larch disease, of the difficulty experienced in obtaining any assistance from a practical point of view in dealing with what was proving to be a very serious disease among trees, and one of immense economic importance. He suggested that if a qualified person could be found, he should undertake a systematic investigation, for which a small grant from the Royal Society would most probably be forthcoming. Mr. Elwes adds that the disease cannot be studied in the laboratory alone, but only profitably by visiting places where it has appeared, so as to discover the conditions which produce it.

### Frome, August 4th.

The annual exhibition of this society was held on Bank Holiday, not under the best of weather conditions, the early morning and afternoon being stormy. This, however, did not detract from a good attendance. Despite the untoward season this exhibition, on the whole, was above its average, both in extent and quality, and its popularity gains, rather than diminishes, among exhibitors and the public who pay their annual visit.

Well filled classes are provided for groups, Ferns, flowering and foliage plants, Fuchsias, table plants, &c. The first-named naturally attract the first notice, and on this occasion additionally so, by the extent of competition. Messrs. E. S. Cole and Son, Bath, wrestled with Chas. Baily, Esq., Frome (gardener, Mr. J. Pope), for first prize, and succeeded both in winning and setting an example in decorative art, his Crotons, Hydrangeas, Amaryllis, small Caladiums, Eulalias, Orchids, &c., being disposed with much taste. Mr. Pope's group, however, was well arranged, and did credit to local effort and skill. There were other exhibits. Mr. George Tucker, Hilperton, won with six flowering plants, staging a fine Anthurium, Dipladenia, and Statice intermedia among them. Colonel Vivian, Trowbridge (gardener, Mr. W. Strugnell), well won the first prize for six foliage plants with Kentia Fosteriana and Belmoreana and Areca lutescens as his best. Ferns in twelve varieties were excellent, both in freshness, variety, and size of plant. Messrs. Stokes, Trowbridge, gained the premier honours, comprising among them *Leucostegia immersa*, *Adiantum fragrantissimum*, and *Lomaria gibba*, extra fine. With six varieties Mr. George Tucker was first, also good in plant and variety. Table plants were a nice feature, the competition keen, varieties good, and evenness marked throughout the whole. Messrs. Strugnell and Stokes and Son secured the prizes in the order of their names. Specimen trained Zonal Pelargoniums staged by Messrs. G. Tucker and Cory and Sons were in the pink of condition, as also were the trained Coleus from the last-named exhibitors. Groups of Begonias were very bright and choice; and cut flowers, Dahlias, Roses, Sweet Peas, greenhouse and perennials, made a brave display in bright and varied kind.

Fruit, as usual, made an attractive display, and though there were marked evidences of the lateness of the season, the extent and quality of the whole was extremely good. Mr. Pope won with six varieties, which comprised good Grapes, Peaches, Melons, Nectarines, and Cherries, Mr. Strugnell and the Fruit and Flower Co., Frome, taking the remaining prizes. With a collection of hardy fruit Mr. Strugnell won easily, as he did also with Nectarines, which gained him Messrs. Toogood's medal for the best fruit exhibit. The Fruit and Flower Co. won with Peaches, and A. R. Baily, Esq., triumphed with both black and white Grapes. Apples and Plums were scarce, and much below their usual standard in size and quality.

Several classes are provided by seedsmen for collections of vegetables, and though the competition was restrained by the exigencies of past weather, there were in many instances a keenness and high quality prevailing. Autumn Giant Cauliflowers, staged by Mr. Pope, were most superior, and Runner Beans from Mr. Hall, of Wells, were out of all proportion with past weather. Root vegetables, Peas, Tomatoes, and Potatoes were all of superior quality.

Non-competitive groups from the Earl of Cork's gardens, and from Longleat are an attraction of long standing at the Frome Shows. Mr. Pearce's Crotons are remarkable both for colour, development, and choice variety. C. Russeliana, Golden Ring, Sunset, Disraeli, and Countess were extremely bright. The group is made rich and varied by the great wealth of Croton foliage, and is toned only by the addition of Palms, Cannas, Ferns, and other bordering plants. The Longleat arrangement was enriched by the small but telling *Caladium argyrites*, *Begonia*

*Gloire de Lorraine*, *Eulalias*, *Celosias*, and other plants forming a base to tall spreading Palms above them.

### Malton, Yorks, August 6th.

This society held its forty-third annual show in the Orchard Field on the above date. Unfortunately the day was a very wet one, for although it cleared off soon after noon, it came on again about three o'clock, and continued during the rest of the day. Notwithstanding, there was a good number of visitors from the neighbouring towns and villages, as well as from Malton itself. This is rather a large show for a small town, embracing, as it does, in addition to the floral and horticultural section, agricultural and dairy produce, honey, poultry, pigeons, rabbits, cats, and dogs. It is the former section, however, only that will have most interest in these pages.

Like many other shows, the specimen plants exhibited are not so good as they were a few years ago. The principal class was for six stove or greenhouse plants in bloom, for which prizes of £5, £2 10s., and £1 10s. were offered. Mrs. Kitchen, of Darlington, was an easy first with *Rondeletia speciosa*, *Allamanda Hendersoni*, *Clerodendron fallax*, *Dipladenia amabilis*, *Clerodendron Balfouriana*, and a seedling *Dipladenia*. Messrs. Simpson and Sons, of Selby, were second. The same exhibitors also took the prizes for three ditto in the same order. Mrs. Kitchen staged four exotic Ferns, good specimens; Messrs. Simpson and Sons second. Ericas, Fuchsias, Caladiums, Begonias, Geraniums, Liliums, and other plants had classes provided for them, and were fairly well shown. Plants for dinner table decoration are always an interesting feature. There were two classes, one for six plants, the other for three. Mrs. Kitchen secured first place in both classes; Mr. McPherson, gardener to the Earl of Londesborough, second; Messrs. G. Longster and Sons, Malton, were third; in the first class Messrs. Simpson and Sons third for three.

There was a very good display of cut flowers, and the stewards had great difficulty in finding room for all the exhibits, which, perhaps, may be some excuse for the unsatisfactory manner in which they were staged.

Dahlias were not so good as they usually are. There was only one entry for twenty-four Show Dahlias, set up by Messrs. Clark and Son, of Rodley. The same exhibitor was first for twelve; Mr. R. Gowthorpe, York, second; Mr. Hutchinson, Kirbymoorside, third. Messrs. Clark also took the prize for Cactus and Fancy varieties, and Mr. Hutchinson for bunches of Pompons. A large quantity of Sweet Peas were shown, enough to fill half the space almost allotted to the cut flower section. There were three classes, for twelve, eight, and four distinct varieties. Mr. R. Akester, Driffeld, was first in all three classes, and Mr. Hutchinson second. Good herbaceous flowers were set up, the best being by Mr. Hutchinson, followed by Messrs. Harkness and Sons and Mr. R. Dobson. Mr. J. Whitehead secured first prize for twelve bunches of annuals.

Roses were well shown, Messrs. Harkness and Sons were first for twelve distinct varieties, staging beautiful blooms, comprising Gladys Harkness, Madame Jos. Courbet, François Michelin, White Lady, Her Majesty, Captain Hayward, Marchioness of Downshire, Duke of Fife, Gustave Piganeau, Bessie Brown, Ulrich Brunner, and Marchioness of Londonderry; Mr. Hutchinson was second, with good blooms; Mr. R. Dobson third. For six varieties, three blooms of each, the same exhibitors carried off the prizes in the same order, G. L. Beeforth, Scarborough, being third. Messrs. Harkness were first for six Tea Roses; Mr. Hutchinson second. The last named exhibitor had the best basket of cut Roses most tastefully arranged, they being chiefly dark varieties; Mr. L. J. Horsley, Norton, second. Some nice bridal bouquets were staged, the best being from Mr. J. Horsley; followed by Mr. R. Akester and Messrs. G. Longster and Sons. Mr. McPherson was first for a basket of Carnations most tastefully arranged.

Prizes were offered for many other kinds of flowers, but want of space prevents particularising. Wild flowers were well shown in two classes, for twelve distinct varieties and hand bouquet; there were several entries in both classes, Mr. J. Whitehead, of Appleton, being first; Miss D. Ward, Amotherby, second; Mr. G. Wray, Thorpbasset, third in the former class. We like to see wild flowers catered for at provincial shows.

In fruit, the first class was for four varieties. Mr. McPherson secured first place with Muscat of Alexandria Grapes, Royal Jubilee Melon, Bellegarde Peach, and Queen Pine, all good. He was followed closely by Mr. T. Hague, Carlton, who had Black Duke Grapes, Royal Sovereign Melon, Black Prince Pine, and Violette Hâtive Peach. Three bunches black Grapes were staged by Mr. Hague, who had Black Hamburgh; Miss A. Harrowing, Sleights, second; J. E. Stringer, Esq., Slingsby, third, with Gros Maroc. In the corresponding class for white Grapes, Mr. McPherson was placed first; Mr. T. Hague, second; J. E. Stringer, Esq., third, all staging Muscat of Alexandria. Mr. McPherson was also first for six Peaches; Mr. T. Hague second. The last named was first for six Nectarines; Mr. McPherson second. For one Melon, Mr. Hague was first; Mr. Freeman,

Malton, second. Apples, Pears, and Plums were much below the usual standard, owing no doubt to the cold season. George Hall, Esq., Brawby, was first for six varieties of baking Apples; Mr. J. Whitehead second. For three varieties of Pears, Mr. J. S. Upex, gardener to Hon. H. W. Fitzwilliam, was first; Mr. J. Horsley second. Small fruits were below the average both in quantity and quality.

Some good vegetables were shown. Potatoes very good; tap-rooted vegetables not quite as good as usual. Messrs. G. Longster and Sons were awarded a Certificate of Merit for an exhibition of choice cut flowers and plants which were not for competition.

### The Midland Carnation and Picotee, August 7th and 8th.

The annual exhibition was held in the Exhibition Hall of the Botanical Gardens, Edgbaston, and considering the somewhat unfavourable character of the season, it compared most favourably with its predecessors. There were upwards of 500 entries, and there was a keen competition in several of the leading classes. Unfortunately, however, owing to the rain that prevailed on both days, there will be a considerable financial deficiency. The absence of the collection of Carnations and Picotees of Mr. Martin Smith and Mr. Douglas were missed from the South, but were compensated for by the fine exhibits of the other contributors. The arrangements, as usual, were satisfactorily carried out, and much credit was due to the energetic and hard-working assistant secretary, Mr. Herbert Smith. At the luncheon, it was with a species of regret that Mr. R. Sydenham announced his retirement, owing to pressure of other business affairs, from the official position he has so long held in connection with the society, and he had much pleasure in announcing that Mr. W. H. Parton, Kingsheath, an ardent Carnationist, had consented to succeed him. Mr. Parton in response remarked that he hoped to do all that lay in his power to follow in the footsteps of Mr. Sydenham, very difficult though it might be.

There was an extremely keen contest in the class for twelve self Carnations, dissimilar, nine exhibits being staged, and the major portion of the blooms of excellent quality. Mr. Samuel Gibbs, gardener to Mr. Robert Sydenham, was placed first with large clean blooms. A tendency to roughness, however, was apparent in two or three of them. The complement consisted of Sapho, Hildegunde, Boreas (all excellent), Midas, Exile, Almoner, Queen of Scots, The Naiad, Bishop Ipsley, Mrs. Colby Sharpin, Her Grace, and Comet. The second prize was annexed by Mr. R. G. Rudd, gardener to Mr. R. C. Cartwright, with a lot hardly inferior to the premier set; his varieties were Orpheus (fine), Mrs. Eric Hambro, Sir Bevys, Ensign, Endymion, Seagull, Germania, Her Grace, Vivid, Benbow, Much the Miller, and Comet. Third, Mr. C. F. Thurstans, Wolverhampton; fourth, Mr. W. H. Parton, King's Heath; fifth, Messrs. Thomson and Co.; sixth, Mr. A. Chatwin, Edgbaston; seventh, Mr. A. R. Brown, Handsworth.

For six selfs there were fourteen contestants. Mr. A. W. Jones, Stetchford, led with a superb board of Hildegarde Britannia, Lady Hermione, Much the Miller, Mrs. Eric Hambro, and Sirdar. The Rev. C. A. Gottwaltz, Droitwich, scored a good second with Chaucer, Waxwing, Mrs. Eric Hambro, Pink Pearl, John Pope, and Bishop Ipsley; whilst Messrs. W. H. Twist, Yardley; C. W. Kemp, Edgbaston; J. F. Smith, Sparkhill; Blackmore and Langdon, Bath; and David Walker, Kilmarnock, followed in the order named.

The five exhibits in the class for twelve yellow-ground Picotees made a splendid display, and Messrs. Thomson and Co., Birmingham, won the blue ribbon with grand blooms of Lady Bristol, Lady St. Oswald, Mrs. Herbert, Ladas, Gertrude, Hesperia, Childe Harold, Mohican, Heather Bell, Lauzan, Badminton, and Kittywake; second, Mr. R. G. Rudd, with Lady St. Oswald, Alcinous, Mohican, Onda, Edith, Mrs. Tremayne, Lauzan, Lady Bristol, Gertrude, Childe Harold, Daniel Defoe, and Heliodorus; the three following awards fell to Messrs. Artindale and Co., Sheffield, W. H. Parton, and S. Gibbs.

For six yellow-ground Picotees Mr. A. W. Jones was invincible with a superb set of Lady Bristol, Lady St. Oswald, Lauzan, Gertrude, Edith, and Heather Bell; second, Messrs. Blackmore and Langdon with fine examples of Alcinous, Gertrude, Childe Harold, Mr. Keeling, Lauzan, and Maudie. Messrs. C. F. Thurstans, A. Chatwin, S. Gibbs, W. and D. Rotch, of Liverpool, and A. R. Brown were the other successful winners out of sixteen competitors.

There were ten exhibits in the class for twelve Fancy Carnations, distinct, and Mr. R. G. Rudd was honoured with the first prize for Argosy, Duke of Alba, Queen Bess, Voltaire, Hidalgo, Stanley Wrightson, Renegade, Muleteer, Charles Martel, Goldylocks, Pagan, and Helios; the second prize fell to Messrs. Thomson and Co. for a close lot of Brodick, The Gift, C. B. Thomsen, Sunset, Jessie Donz, Voltaire, Clara Butt, Surprise, Hidalgo, Faust, Galileo, and Oberon. Messrs. W. H. Parton, S. Gibbs, Artindale and Son, A. R. Brown, and W. D. Rotch were respectively successful out of the ten competitors.

Mr. A. W. Jones again led for six Fancy Carnations, dissimilar, with grand flowers of Argosy, Elaine, Argosy (sport), Eldorado, Aglaia, and Meteor; second, Mr. J. F. Smith, Sparkhill, with Lady St. Oswald, Alcinous, Mrs. Herbert, Hesperia, May Queen, and Heather Bell; and Messrs. C. F. Thurstans, W. Spencer (Windsor), C. W. Kemp, A. H. Beadles, E. J. Wootten, and Pemberton and Son, in their order named.

There was a keen contest in the class for twelve white-ground Picotees, dissimilar, and Messrs. Thomson and Co. led with grand examples of little Phil, Brunette, Mrs. Beswick, Mr. Openshaw, John Smith, Fortrose, Favourite, Pride of Leyton, Amy Robsart, Thomas Williams, Muriel, and Mrs. Sharpe; the second position was accorded Mr. A. R. Brown with fine examples of Brunette, Favourite, W. H. Johnston, Miriam, Mrs. Beswick, Mr. A. R. Brown, Ganymede, Thomas Williams, Mrs. Gorton, Aggie, Fanny Fell, and Unique. Messrs. Pemberton and Son, C. F. Thurstans, S. Gibbs, and Artindale were the other winners.

For six white-ground Picotees, Mr. W. H. Goodfellow went to the front with a nice lot, consisting of Lavinia, Brunette, Ganymede, Grace Darling, Harry Kenyon, and Mrs. Openshaw; second, Mr. J. J. Keen, Southampton, with Amy Robsart, Little Phil, Mrs. Payne, John Smith, Grace Darling, and Thos. Williams; whilst Messrs. D. Walker, A. H. Bedales, Sydenham, J. F. Smith, Charles Chatwin, and E. J. Wootten followed on.

For twelve flake or bizarre Carnations, dissimilar, Messrs. Thomson and Co. were again victorious with fine examples of J. S. Hedderley, Gordon Lewis, Master Fred, Meteor, Geo. Melville, John Wormald, Robert Lord, Wm. Skirving, Sportsman, Robert Houlgrave, J. D. Hextable, and Admiral Curzon; the second prize went to Messrs. Pemberton and Son for R. Houlgrave, Gordon Lewis, Sportsman, Mrs. Rowan, Admiral Curzon, Geo. Melville, Robert Lord, Geo. Rudd, Merton, Robroy, Flamingo; and Messrs. S. Gibbs, C. F. Thurstans, and Artindale were the other winners.

In the class for six flake or bizarre Carnations, Mr. D. Walker, Kilmarnock, was the victor with excellent blooms of Geo. Melville, J. S. Hedderley, John Wormald, Mrs. May, Master Fred, and R. Houlgrave; whilst Mr. T. W. Goodfellow trotted in with J. S. Hedderley, G. Rudd, Merton, Sportsman, Gordon Lewis, and Miss Constance Graham; the others were Messrs. J. J. Keen, E. J. Wootten, and Geo. Chaundy, Oxford. The amateurs, or for those who do not employ a gardener regularly, exhibited well in the classes set apart for them, and included Messrs. C. J. White, Walsall; J. Williamson, Smethwick; J. W. Smart, Moseley; W. Moore Binns, Worcester; H. Boys, Walsall; and T. Newton, King's Heath.

There was an extensive and keen competition in the classes devoted to single blooms. Exhibitors were allowed to stage two flowers in each class, and win with both. The society offered a silver medal to the most successful exhibitor in those classes. Five prizes were offered in each class; but we purpose noting the three leading exhibits in each. For a scarlet bizarre, Messrs. Pemberton and Son won with Robert Houlgrave; second, Messrs. Thomson and Co. with the same variety; and Mr. H. Boys following suit with the same. For a crimson bizarre, Messrs. Thomson and Co. led with J. S. Hedderley, second and third Mr. D. Walker with J. S. Hedderley. For a pink or purple bizarre, Messrs. Thomson and Co. were again to the fore with Geo. Rudd; second, Messrs. Pemberton and Son with Wm. Skirving; third, the same with Geo. Rudd.

For a scarlet flake bizarre, Mr. C. J. White won with Sportsman; second, Mr. W. Walker with W. Wormald; and third, Thomson and Co. with Sportsman. For a rose flake bizarre, Messrs. Thomson annexed the first prize with Meteor; second, G. F. Goodfellow with Merton; and Messrs. Thomson with Mrs. Rowan. For a purple flake bizarre, Messrs. Pemberton won with Gordon Lewis; second, the same with Geo. Melville; and third, Messrs. Thomson with Gordon Lewis.

**PICOTEES AND FANCIES.**—For a heavy red edge, Mr. C. F. Thurstans led with Brunette; second, C. F. Goodfellow with Brunette; and Mr. J. J. Keen with John Smith. For a light red edge, Mr. C. F. Thurstans was first with Mrs. Gorton; second, Messrs. Pemberton and Son with Thomas Williams; and third, Mr. S. Gibbs with Thomas Williams. For a light purple edge, Messrs. Thomson were first with Pride of Leyton; second, Mr. W. H. Twist with Somerhill; third, Mr. E. J. Wootten with Pride of Leyton. For a heavy rose edge, Messrs. Pemberton with Little Phil; second, Mr. R. G. Rudd with Little Phil; third, Mr. D. Walker with Mrs. Beswick. For a heavy scarlet edge, the Rev. C. H. Gottwaltz won with W. H. Johnston; second, Mr. W. Spencer with the same variety; and third, Mr. J. J. Keen with Scarlet Gem. For a light rose or scarlet edge, Messrs. Thomson were to the fore with Fortrose; second, Mr. S. Gibbs with Favourite; and third, Mr. A. R. Brown with Favourite.

For a yellow ground Picotee—wire edged—Mr. S. Gibbs was placed first and second with fine blooms of Childe Harold; and third, Mr. W. Spencer with the same variety. For a medium or heavy edged variety, Messrs. Thomson led with



Gertrude; second, Mr. G. Chaundy with Gertrude; and Mr. S. Gibbs third and fourth with Gertrude. For a yellow ground Fancy, Mr. W. M. Binns led with Oakley; second, Mr. J. H. May, Malvern, with Argosy; third, Mr. R. G. Rudd with Argosy.

For a Fancy Carnation, other than yellow ground, Messrs. Blackmore and Langdon secured the first prize with Millic; second, Mr. A. R. Brown with Artemis; and third, Mr. S. Gibbs with Muleteer.

In the class for selfs, for a white or blush, Mr. G. F. Thurstan was to the front with Mrs. Eric Hambro; second, Mr. W. Spencer; and Mr. A. W. Jones third; both with Mr. E. Hambro. For a yellow self, Mr. W. H. Parton won the first prize with Britannia; second, Mr. A. W. Jones with Almeria; and third, Mr. S. Gibbs with the same variety. For a buff or terra-cotta, Mr. S. Gibbs led with Benbow; second, Mr. R. G. Rudd with Mr. R. C. Cartwright; and third, Mr. C. F. Thurstan with Benbow. For a rose, pink, or salmon, the first prize was won by the Rev. C. A. Gottwaltz; second, Messrs. Thomson and Co. with Ladik; and third, Mr. A. R. Brown with John Pope. For a scarlet, Mr. R. G. Rudd first with Binglass; second, Mr. A. H. Parton with W. J. Crane; and third, Messrs. Artindale with Lady Hindlip. For a dark crimson, maroon, or other dark self, Messrs. Thomson led with Miss F. Sims, a very deep but bright crimson of large size and fine substance, it is likely to be the leading variety of the kind for a long time, and, of course, is highly prized by Mr. C. R. Herbert, that firm's expert raiser, a First Class Certificate of Merit was awarded it; second, Mr. R. G. Rudd with Sir Bevys; and Mr. S. Gibbs with Agnes Sorrel.

There was a very strong competition in the popular class for undressed and border varieties, foliage and buds allowed. Space prohibits details; and it must suffice to remark that the major portion, both of exhibitors and the varieties, of Carnations and Picotees were represented, as in the previous mentioned classes. It should be mentioned that the Rev. C. A. Gottwaltz's new variety of Carnation, John Pope, is a distinct and striking rose pink self, and it was awarded a First Class Certificate of Merit.

**PREMIER BLOOMS.**—There were several prizes awarded in this class—Mr. A. W. Jones for Eldorado, Messrs. Thomson for Pride of Leyton, Gertrude, Childe Harold, and Mrs. Sims.

Shower bouquets of Carnations or Picotees were very well put up by Messrs. Artindale and Co., Messrs. John Pope and Son. For spray of Carnation or Picotees, Mrs. A. M. Wilson (Spilsby), Mr. S. Gibbs, and Mr. W. B. Latham were the prizetakers. For buttonholes, Miss J. E. Kemp, Messrs. Artindale, and R. G. Rudd, as mentioned. There was a strong competition, and excellent taste was displayed throughout.

Sweet Peas were a fine feature, and a strong competition was in force for Mr. R. Sydenham's special prizes. Mr. F. J. Clarke, Leicester, led with a grand lot; second, Mr. V. B. Johnstone, Wolverhampton; and third, the Rev. T. Buncombe, Ruabon. For a floral arrangement of Sweet Peas, the first prize was given to Mrs. Simpson, Shipston-on-Stour; second, Mr. H. Hookham, Selly Hill; and third, Mr. A. Measton, Selly Park.

There was a fine display of collections of flowers by the trade, being exceptionally good. Honorary awards: A Silver-gilt Medal to Mr. B. R. Davis, Yeovil, for cut Begonias, and to Mr. Amos Perry, Winchmore Hill, London, for a beautiful display of Nymphæas and other hardy flowers. To Mr. W. Sydenham, Tamworth, a Silver Medal for a splendid display of Violas, designs in Roses, bunches of Roses, &c.; to Messrs. Dickson, Chester, for a fine collection of hardy flowers; to Mr. J. White, Worcester, for a fine collection of hardy flowers; to Messrs. Simpson and Sons, Sweet Peas; to Mr. Mortimer, Farnham, for collection of Cactus and Show Dahlias; to Messrs. Phillips and Taylor, Bracknell, for collection of Carnations; and to Messrs. Hewitt, Solihull, for a grand collection of hardy flowers.

### Irish Gardeners' Association.

Upon July 31, the above society held a display of Roses, Carnations, Sweet Peas, and Tomatoes. The exhibits were limited to the members, and were held at their usual quarters in D'Olier Street, but the space available was by far too cramped for their effective display. The exhibits revealed the high water mark of culture, and the task of judging was discharged by Messrs. F. W. Burbidge, M.A., F.L.S. (president), W. Ramsay, J.P. (Ballsbridge), and Mr. Dick (late superintendent of Phoenix Park). Mr. Cavanagh, gardener to R. W. Booth, Esq., Victoria Castle, Dalkey, took the first prize for Roses with a superb array, considering the mid-season. The second prize fell to the lot of Mr. Kavanagh, gardener to Mrs. Falls, Shankill, with a very meritorious group, and Mr. Richardson, gardener to Major Cusack, Abbeyville, Malahide, was third. The stand comprised twelve Roses in at least six varieties on stalks, with their own foliage, for a stand of six bunches of Sweet Peas with their own foliage, lightness of effect to be taken into consideration, along with quality of bloom, for premier place, Mr. Cavanagh, gardener to R. W. Booth, Esq., Victoria Castle, Dalkey, came first with a very effective display, while Mr. Ryan, gardener to J. Clancy,

Esq., Artane, was second with fine flowers, but bunching too massively. Mr. Richardson, gardener to Major Cusack, was a good third. For a stand of eighteen Carnations in six varieties at least, no prize was given, owing to the want of sufficient entries, nevertheless the stand erected by Mr. O'Kelly, gardener to W. J. Murphy, Esq., Dartry, Palmerston Park, deserved something more than a highly commended, as the blooms were large, good colour, and form. For a dish of Tomatoes, not less than four fruits to be shown, the prizes had likewise to be withdrawn owing to want of competitors, yet the respective dishes of Mr. D. Ryan, gardener to J. Clancy, Esq., Artane, and Mr. O'Kelly, gardener to W. J. Murphy, Esq., Dartry, were of a high order of merit, and were highly commended. The judges subsequently stated they would have liked to award prizes in the last two classes, as they were thoroughly deserved.

Messrs. Alexander Dicksons and Sons, Newtonards, Belfast, displayed a matchless array of Roses. Amongst the many staged, they likewise submitted for the first time four new seedling Roses which have not been shown hitherto, and are not yet in commerce, namely, Mrs. David McKee, in colour a pale primrose yellow, and very heavily scented, delicate, of fine form, with a faint tinge of crinkling in the petals, giving the idea of an egg shell; Bob Davison, a fine flower of massive proportions, in colour a dark crimson; Lady Ashtown, of fine shape, similar to W. J. Grant, a tapering bloom with great depth of substance; and John Ruskin, a medium built Rose, in hue a rosy pink. For the latter they were unanimously awarded the society's certificates. Messrs. Watson and Sons, Clontarf, showed Carnations and Picotees to advantage, comprising a very fine collection, the varied types were bunched with their own foliage, and were much admired. They were awarded the society's certificate for cultural excellence.

Subsequently, the financial report was submitted for approval, and it showed a steady increase in the funds of the society. Mr. Cottier moved the adoption of the report, and was seconded by Mr. O'Kelly, and it was passed unanimously. Then Mr. Campbell, gardener to Lady Ardilaun, St. Ann's, Clontarf, very pleasantly discoursed on Roses.

### The National Fruit Growers' Federation.

At a meeting of the provisional committee of the above Federation, held lately at the Westminster Palace Hotel, Colonel C. W. Long, M.P., president of the Federation, in the chair, it was announced that the Marquis of Camden had accepted the position of patron, and that the following gentlemen had been added to the list of vice-presidents: Sir A. F. Godson, M.P., Colonel Warde, M.P., Messrs. P. S. Foster, M.P., J. Howard, M.P., G. Guy Pim, M.P., George White, M.P., and C. W. Radcliffe Cook, late M.P. for Herefordshire. A large number of leading fruit growers were then elected as members of the Federation. In addition to the routine business, an important discussion took place on the vital question of fruit distribution. It was opened by a member, who called attention to many startling facts on the authority of the United States Year Book, in connection with this problem, which so vitally affects the interests of both growers and consumers in this country.

The present system, or rather absence of system, he showed, was little less than a national disgrace, paralysing as it does the successful production of soft summer fruits, notably Strawberries and Raspberries, which are placed on the market with alternate gluts and short supplies, with the result, in the first instance, that much fruit is sold at a price less than the cost of picking, and in the second at a prohibitive one to the ordinary householder. In the year 1871 there were about half a dozen large fruiterers in London, when only Oranges and Lemons were offered, besides home-grown fruits in their season. The revolution since then has been due to the discovery in 1889 of the refrigerating or dry air process. Three years later, 600 refrigerator cars were running in the United States and Mexico, and last year 60,000 were at work, by which means 95 per cent. of the Californian fresh fruits are distributed. Owing to dry air transit, we now see in London vast numbers of shops selling foreign fruit in good condition, while our own producers, within fifty miles of market, are unable to compete without risk of ruinous loss for want of proper modern facilities, and unless something is done their industry must be entirely swamped by importers. In the opinion of the speaker, refrigeration, if adopted in this country, would save the position and solve the distribution problem. Soft fruits arriving at the large termini need not then be crammed on to a glutted market, when the jam houses are full, as if properly packed and placed in the cars in good condition they would retain that condition from two to five days. The supply would thus be steady and equal to the advantage of all concerned, and towns which now scarcely see the popular Strawberry and Raspberry would get their share.

It was resolved to request the railway managers to receive a deputation in October to confer with them on the best means of avoiding losses by delay in delivery of fruit, whether by the use of refrigerator cars or otherwise.

## Young Gardeners' Domain.

### Stoking.

Stoking in my opinion should receive by young gardeners the same careful attention they would attach to Orchids or other branches. But I am afraid there are some who regard certain parts of the profession (because they don't seem so interesting as others) not worth that due care and cleanliness that should be bestowed on them. Stoking is one of these, and it is often, so often terribly neglected. The way to treat and manage a fire properly was one of the first lessons taught me when I commenced work. I have profited much by that lesson, and remembrance is still vivid.

Of course any practical person knows how to light a fire, and no doubt not a few know how to manage it with success afterwards; to the uninitiated it is, I write. The first operation when starting a fire is to thoroughly clean it of all dust and clinker, moving the mass, which should be comparatively small, to and fro till the work is properly done; draw the fire near the dead-plate and clean the back of all dust, otherwise a bad circulation of draught will follow. This finished, keep the fire well forward to the door, and commence feeding. Clean ash-pit daily, and brush up the stokehole. Now, every time the fire is stoked, keep the back clean, and the clinker-rake well worked between the bars from underneath.

Never put a lot of fuel on at one time. If it is necessary to drive fiercely, my motto is to feed sparingly, but attend frequently. It is a great mistake to attempt to obtain the maximum amount of heat by fiercely driving the fire and wasting large quantity of fuel, with the damper carelessly used, by having it too far out or up, as the case may be, causing a lot of heat to go up the chimney without giving much help to the boiler.

The theory of stoking is to get the greatest amount of heat with the least amount of trouble and expenditure, and this is more easily accomplished by keeping the fire well forward, so enabling the flame-heat to travel the whole length of boiler, and that not too swiftly. Of course, when the term "banking-up" is used, the work is in a sense reversed. Push the fire a reasonable distance towards the back of boiler, and throw on the quantity of fuel considered enough to last, regulating the damper accordingly. The foregoing remarks apply principally to boilers of the saddle and Cornish types.—A MAN OF KENT.

### Lispings.—BY ONE OF FLORA'S NURSERY.

A garden is a place where we grow flowers, vegetables, and sometimes fruit, but fruit is usually grown in orchards. In some places only flowers are grown in the gardens, and in others only vegetables. The gardens are larger in the country than in the towns. There are two kinds of flowers: (1) Garden flowers, and (2) Wild flowers. I will now try to give a list of garden flowers: Roses, Lilies, Violets, Daffodils, Snowdrops, Crocuses, Asters, Stocks, Wallflowers. It is only a short list, but I must now get on to something else. I would like to give you my idea of a pretty garden—how a garden ought to be in summer.

Take a round garden, for instance. It ought to have a border of Roses and a lawn in the midst, with a summer house at one side and a pretty pink and white rockery on the other. A front garden in spring looks best with plenty of those pretty spring flowers, such as Crocuses, Snowdrops, Hyacinths, Primroses, Winter Aconites, Daffodils, and Violets. Gardens in which very little can be grown do not look badly with a rockery all round covered with Ivy, Woodruff, Creeping Jenny, and Periwinkle. Lawns look much nicer with a floral border than just plain, and gardens look nice with plenty of large shady trees. I once lived at a house where there was a Rose tree nearly as big as a summer house, and the name of the Rose was "Ruga" (?).

In autumn everybody ought to take great care to sweep up the leaves, as it makes the garden untidy to have leaves blowing about. Rose trees look very nice on walls as hedges, and up pillars. At the house I am living at now there is rather a pretty rockery in the middle of the front garden. Window-boxes look very nice filled with Stocks and Asters. Clematis and Roses look very pretty on old rustic porches. Last year we had a large bed of Poppies of every shade except blue. We had two very pretty tall flowers last year, which were large Lilies and Hollyhocks. One of my mother's favourite flowers were Convulvulus, because every morning there was a different colour. Children are very fond of having little gardens of their own in which they grow all manner of funny things, such as Chickweed, &c. We have a Willow tree in the front garden, which is very nice to hide under in summer. One ought to kill all the snails one sees, for snails eat up all leaves, and then the plant dies. Gardens look nice in winter with a few evergreens, such as Holly, Myrtle, Ivy, and Laurel. When gathering flowers children often get them with very short stalks, but when I pick flowers my mother makes me pull them with long stalks, and she tells me not to forget plenty of foliage.—DAFFODIL MARGARET FISHER, aged 9 years.



### Fruit Forcing.

**PEACHES AND NECTARINES: EARLIEST FORCED HOUSE.**—Trees started in December and early January must not lack water at the roots. When this occurs during the formation and perfecting of the buds they become "deaf," and fall instead of expanding into blossom when started. Affording a slight shade to trees under fixed roofs where the panes of glass are large has the advantage of preserving the foliage in good condition, thus preventing premature maturity of the foliage and the over-development of the buds, which is one of the causes of their dropping. Supply a top-dressing of phosphatic and potassic manure to weakly trees, and water as may be necessary to keep the soil in a moist condition. Needless waterings only saturate the soil, sour it, and destroy the roots. Where the lights have been removed watering may not be required, but attention must be given to this matter by timely examination. Rain is accompanied by a lower temperature, and no harm results provided the borders are properly drained; indeed, the ammonia and nitric acid brought down by rain have a most beneficial effect on the trees. Allow some laterals that are green to remain, as such unripe growths act as outlets for any excess of sap, a safeguard against starting the buds, hence in pruning it is not desirable to cut back next year's bearing wood unless the shoots are of great length. Very little pruning will be needed providing disbudding has been properly attended to, and no more wood been trained in than is absolutely necessary to replace that bearing in the current year, and to renew worn-out growths. Early forced trees do not, as a rule, make strong growth, and there is often a preponderance of blossom over wood buds, therefore need but little pruning. Trees long subjected to early forcing become enfeebled and are benefited by cutting out some of the old wood, especially the long branches, but this must be done judiciously, always having regard to a crop. Some trees are the exact opposite, making too vigorous growth, long-jointed, and these should be restrained. This is not effected by stopping, though it is useful in causing a diversion of the sap from the strong to the weaker parts of the trees, thereby assisting in an equal distribution of the nutriment, consequently tending to the maturity of the wood and buds. Any trees that grow too vigorously must be lifted and their roots laid in firm material near the surface. Those showing symptoms of weakness may have the old soil carefully removed from amongst the roots, supplying turfy loam, with an 8in potful of two parts wood ashes and one part bone-meal, mixed, to each barrowload of rather strong loam. Give a good watering both to lifted and soil-renovated trees, mulching with short manure. These operations require to be performed as soon as the leaves have matured; but by or before they fall from the trees.

**SECOND EARLY HOUSES.**—The trees having had the bearing wood cut out and kept free from insects, will now have the wood sufficiently matured to admit of the removal of the roof lights, where these are moveable. This exposure has a beneficial effect on the trees, the air hardening the growths, and the dews and rains cleansing the foliage, while growth is arrested on the one hand, and steady maturity of the other secured. In the case of fixed roofs and the panes of glass large and clear, it is an excellent plan to coat the glass with a thin wash of whitening and skim milk, applying with a brush. Admit air to the fullest extent, and see that the trees are kept free from insects and not neglected for water at the roots.

**TREES CLEARED OF THEIR CROPS.**—Cut away the shoots that have borne fruit unless required for extension, and where the growths are too crowded they should be thinned. This will allow air and light to harden the wood by increasing evaporation and elaboration, and more food will be stored in the buds and adjacent stems for the benefit of the blossoms and fruit in the coming season. It will also permit of the foliage being kept clean and healthy through freer access of water by the syringe or engine, also, if necessary, the more efficient application of an insecticide for cleansing the trees of red spider, brown aphid, and scale. These matters are very important, as it is essential that the foliage be kept clean and healthy to the last. Water must be given, as it is necessary at the roots, but avoid needless waterings, especially when the trees are vigorous, and lifting is intended. Admit air to the fullest extent, especially at night.

**HOUSES WITH FRUIT RIPENING.**—A free circulation of air will enhance the quality of the fruit, and water need only be given to prevent the foliage becoming limp. Secure air moisture by an occasional damping of the house for the benefit of the



foliage, also fruit, which in an arid atmosphere is liable to become mealy, whilst it ripens prematurely if the trees suffer by want of water. Ants are often troublesome. They take to treacle greedily. Bits of sponge held tightly in the fingers, then dipped in the syrup and then relaxed, will absorb some, and a gentle squeeze in withdrawing will leave enough in the sponge to entice the ants. These laid in saucers in their haunts will rid any place of the active creatures by immersing the sponge occasionally with the ants in them in boiling water. Cleanse the sponges each time, and repeat the dipping. Partially picked bones, such as come from table, are admirable baits for ants, the bones quite dry and fresh being laid in their haunts, and when they are covered with the pests immerse them in boiling water. The bones freed from the surplus moisture are available for a considerable time, as the immersion in boiling water destroys the fungoid and animal germs inducing putrefaction.

**LATE HOUSES.**—Trees that have the wood thin have a better chance to ripen, and the foliage to elaborate the sap, than these with the summer growths laid in so closely as to impede air and light. On the assimilation of the food depends its storing in the wood and buds for the support of the blossom and embryo fruit in the coming season. Gross growths tend to impoverish the weaker, appropriate an undue amount of sap, and tend to gumming and unprofitableness; they must be stopped or removed. An even spread of moderately strong, short-jointed wood is desirable. Ventilate the house early in the morning, allowing a good heat by day, and closing so as to secure 85deg or more, for sun heat after evaporation has been going on for some time will not do any harm, if care be taken to admit a little air before nightfall, and the temperature to gradually cool down, thereby securing rest. The night and early ventilation tends to the solidification of the growth and its ripening. Syringe to keep down red spider.—**ST. ALBANS.**

### Kitchen Garden.

**TURNIPS.**—One of several sowings, small or large, according to the demand of the roots during late autumn and winter should now be made. Dig over a piece of ground, making it level and fine, and draw drills at least a foot apart. They only require to be shallow, as Turnip seed is very small. It, however, is sure to germinate well, therefore does not require to be sown thickly. One of the best varieties to sow now is Chirk Castle Black Stone. It is a hardy variety, and has a dark skin. If on this account it is objected to sow Jersey Navet, a white variety of Yellow Finland, pale orange yellow.

**POTATOES.**—Though early for the general lifting, there will be some varieties that are sufficiently ripe to be raised. Choose a dry day for the operation, never lifting more in one day than can be dealt with in picking up, sorting, and placing under cover, excluding light from the tubers that are to be preserved for consumption. Seed Potatoes are better if allowed to become greened over. The small and useless tubers must be kept separate, boiling them as opportunity permits, and mixing with other food for pigs and fowls. This is a safer way than throwing the tubers on a manure heap to rot, where disease spores if present might be retained and again disseminated. The haulm should be carefully gathered up and burnt rather than be allowed to rot in heaps on the ground.

**CAULIFLOWERS.**—Seed of Early London or similar hardy variety may be sown on a sheltered border about this date, following with another later. The seedlings should receive frequent attention, adopting early thinning and pricking out either in a frame or on a protected border where they will stand considerable chance of passing the winter safely. Autumn sowing of Cauliflower is not so general as formerly, owing to many excellent sorts being well adapted for raising in heat early in the year, and growing on for planting out in rich ground in May.

**OUTDOOR TOMATOES.**—If strong plants are kept moist at the roots and well fed when the crop is fairly heavy, the bunches of fruit will swell readily to a normal size. Carry on the feeding until the fruits commence to colour, gathering the forwardest before they become fully ripe, and finish on a warm shelf. This will give an opportunity for the small green fruits to swell larger before they commence colouring. It is important that growth be kept thinly trained and the plants not allowed to choke one another by neglecting to remove superfluous shoots. Old yellow leaves at the base may be advantageously removed entirely, especially below the bottom fruits, and very luxuriant foliage partially shortened when it is necessary to more fully expose the fruits for the purpose of ripening.

**ONIONS.**—Tripoli Onions which should be soon now may include the Giant Rocca, Blood Red, and Lemon Rocca which are hardy, form bulbs of large size the following year, proving useful and indispensable for exhibition. Rousham Park Hero is also good for autumn sowing. A plot of good ground must be prepared in an open position, levelling and making it fine on

the surface. Form shallow drills 12in apart, sowing the seed thinly, and cover with fine soil. If the seed is sown carefully very little thinning will be necessary, and the Onions can stand the winter where they are thinning and transplanting in spring.

**SPINACH.**—A liberal sowing ought to be made of Winter or Prickly Spinach. Choose warm, rich and fertile ground in a good position, and sow in drills, which ought to be soaked with water first if the soil is very dry.

**LETTUCE.**—Where Lettuce will grow and stand the winter it proves of great value. Seedlings succumb mainly to damp in the winter time. If they can be kept dry and comparatively hardy they are able to withstand cold better. Sow, therefore, or plant out seedlings on a well-drained sheltered border, and thin, so that they do not touch one another.

**ENDIVE.**—Moderately large plants of Endive commencing to form hearts should be blanched either by tying the outer leaves together, inverting a pot over the plants, or laying a slate across. Plant out seedlings on a sheltered border, and hoe among advancing plants.—**EAST KENT.**



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

### Plan of a Bethy—Competition.

"Well-wisher" promises a first prize of £3, and the Editor supplies a second prize of £1.

The rules of the competition are as follows:—The plan, drawn to scale, must not exceed 7in broad by 7in deep, and must be clearly defined on stout paper. The plan must provide suitable accommodation for six men, and the cost of the building ought not to exceed £200 to £220. A statement of the general items of cost should accompany the plans, together with any written comments thereon. The competition is open until Christmas, 1902, by which date all plans must be in the hands of the Editor. The sender's name and full address should be enclosed when sending the plan, and the sender will alone be held responsible for it.

**LEAVES OF PEAR TREES BROWN AND WITHERED.** (J. F.).—The twigs have the leaves in a brown withered state, presenting a scorched appearance, but hanging on the branches, the fruit being also more or less browned and shrivelled. The affection accords with the Cherry leaf scorch, caused by the parasitic fungus named *Gnomonia erythrostoma*, occasioning the disease which every now and again proves destructive to the Cherry crop in various parts of Europe, and in recent years has proved disastrous to the crops in some Kentish orchards. There are some dark spots on the dry shrivelled leaves of your specimens, and evidently accord with the places where the conidial condition of the fungus has been produced at an earlier stage in perithecia seated on the discoloured spots. This condition usually occurs at the second or third week in June, the long, slender, colourless, curved conidia or summer spores being discharged and infect neighbouring parts of the trees, the affected leaves withering and remain hanging on the tree. During winter, the ascigerous form of fruit of the fungus is also produced on dead hanging or fallen leaves, and the spores from these start the disease anew on the young leaves in the early part of the summer. In order, therefore, to avoid infection, all the dead, infected leaves hanging on the tree or fallen, should be collected in autumn or early winter, and burned. This must, to succeed, be general throughout the infected district. Where this method has been carried on for two seasons the Cherry crop and also that of Pears, which has been completely ruined, is restored to its former productiveness. The bark and wood of the twigs or small branches appear quite sound, but the growths are very stunted, and the ends extremely weak, due, no doubt, to the collapse of the leaves. Soapsuds, unless used excessively, would not cause the destruction of the roots of the tree, and collapse from such would also have affected the wood.

**GRAPES NOT STONING (A. S. A.).**—It is owing to imperfect fertilisation. The atmosphere has been kept too dry when the Vines were in flower. A moist atmosphere should have been maintained by frequently sprinkling the paths, &c., when the Vines were in flower. We do not advise budding a Muscat on the Black Hamburgh, but you may inarch it now, or early next spring graft the Black Hamburgh with the Muscat. We do not think that will enable you to perfect the Muscats in a greenhouse. Why not plant Foster's White Seedling or Buckland Sweetwater? Either is better than the Royal Muscadine, and more suitable for a greenhouse than the Muscats.

**AMERICAN BLIGHT ON APPLE TREES (A Subscriber).**—The most effectual mode of freeing the trees is to wash them with water by means of a powerful syringe or engine. The insects will be washed on to the ground, and though incapable of further injury, it is well to remove them with a hoe, hoeing and raking the ground as far as the branches extend. If the roots are attacked all you can do is to remove the old soil to the extent of 6 in or 8 in, and for 2 ft or 3 ft from the stem, giving the roots a good washing, and replacing with fresh soil. The soil removed should be burned or taken a considerable distance from the trees. In autumn, after the leaves fall, the trees may be washed with paraffin oil, applying it with a brush to the parts affected.

**MEALY BUG ON GRAPES (Caution).**—As the insect has attacked the bunches, your only plan will be to tie the shoulders out, so as to make the bunches as loose and open as possible, and then you may with a small brush remove the insects. It is not only the bug, but the secretion—honeydew—that you will have to clear away, and that may be partly effected with water at a temperature of 120 deg, applying it with a syringe. To rid yourself of the pest without destroying the bloom and injuring the fruit to some extent is out of the question. When the leaves have fallen, you may then give everything a thorough cleaning, and had this been done before the Vines were started, and had the plants on the back wall been kept clear of the bug, the present state of the Grapes might have been considerably, if not completely prevented.

**TOMATO LEAF DISEASED (J. D.).**—Yes, the leaflets are affected on the under side by the white fly, *Aleyrodes vaporariorum*, in all stages, from eggs to adults. It is the larvæ that do the mischief by piercing the skin and sucking the juices, and the pupæ are also fixed to the leaves, and the insects emerge after a few days spent in the pupal state. The leaves occupied by them turn yellow, wither and die. The insect attacks the leaves in succession from the lower to the upper. It is rather uncommon for outdoor plants to be infected as well as indoor, the former probably having been infected when turned out outdoors, as in our experience these insects are unable to withstand exposure to the open air temperature of England. Under glass, the best remedy for this pest is, ecating the hot-water pipes whilst heated to over 170 degs with a cream of flowers of sulphur and skim milk, keeping the house closed and the pipes hot for an hour, then allowing them to cool down to ordinary heat, repeating this at intervals of about four days twice, or until the pest is annihilated. Spraying the plants on the under side of the leaves with tobacco water is also a good remedy, as also is dusting with tobacco powder. Vaporisation with nicotine compound destroys the insects, repeating occasionally. The leaflets are so affected with the Tomato leaf rust, *Cladosporium pulvum*, which is mostly confined to plants grown under glass in this country, and it follows the leaves in infection from below upwards. To contend against both pests we advise spraying with the following wash: Dissolve 1 pint of soft-soap in 1 quart of boiling soft water. Remove from the fire, and while still boiling hot, add half a pint of paraffin oil, and immediately churn the mixture with a small hand syringe. In five minutes a perfect emulsion will be obtained. Then dilute to 5 gallons with hot soft water, adding 1 oz of sulphide of potassium (liver of sulphur) previously dissolved in about a quart of hot water, mixing well. When cool enough, spray the infected plants, under as well as upper surface of the leaves, coating them with the finest possible film of the solution, and repeat twice or three times, at an interval of four days, so as to destroy the white fly as they hatch out.

**NAMES OF PLANTS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (W. W.).—1, *Clematis viticella purpurea*; 2, *Sophora japonica pendula*; 3, *Catalpa syriaca*; 4, *Datura Stramonium*, the Thorn Apple. (G. C.).—Probably a *Lobelia*, but much dried. (J. Honiton).—*Gnaphalium lanatum*. (M. A. R.).—1, *Malva Crecana*; 2, *Lythrum alatum*. (Avoca).—A poor specimen of *Alstroemeria*.

### Gardeners' Provident and Charitable Institutions.

**THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.**—Secretary, Mr. G. J. Ingram, 175, Victoria Street, S.W.

**UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.**—Secretary, Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

**ROYAL GARDENERS' ORPHAN FUND.**—Secretary, Mr. Brian Wynne, 8, Danes Inn Strand, London, W.C.

### Trade Catalogues Received.

Clibrans, Manchester.—*Bulbs.*

Fisher, Son, & Sibray, Ltd., Sheffield.—*Catalogue of Bulb and Flower Roots.*

Little & Ballantyne, Carlisle.—*Bulb Catalogue.*

T. Methven & Sons, Edinburgh.—*Bulb List.*

Sutton & Sons, Reading.—*Bulbs for 1902.*

James Veitch & Sons, Ltd., Chelsea.—*Catalogue of Bulbs for 1902.*

James Veitch & Sons.—*Catalogue of Hardy Trees, Shrubs, Conifers, American Plants, &c.*

### Covent Garden Market.—August 13th.

#### Average Wholesale Prices.—Fruit.

|                           | s. d. | s. d.  |                         | s. d. | s. d.   |
|---------------------------|-------|--------|-------------------------|-------|---------|
| Apples, English, dessert  |       |        | Lemons, Messina, case   | 12 0  | to 20 d |
| ½-sieve ...               | 6 0   | to 8 0 | "  Naples ...           | 25 0  | 0 0     |
| "  culinary, ½-sieve      | 3 0   | 4 0    | Melons, each ...        | 1 6   | 2 0     |
| Bananas ...               | 8 0   | 12 0   | Neetarinies, doz. ...   | 3 0   | 12 0    |
| Currants, red, ½-sieve    | 5 0   | 6 0    | Oranges, case ...       | 12 0  | 16 0    |
| "  black, "  "            | 9 0   | 10 0   | Peaches, doz. ...       | 3 0   | 12 0    |
| Figs, green, doz. ...     | 2 0   | 4 0    | Pines, St. Michael's,   |       |         |
| Gooseberries, ½-sieve ... | 4 0   | 5 0    | each ...                | 2 6   | 5 0     |
| Grapes, Hamburgh, lb.     | 0 9   | 1 6    | Plums, Orleans, ½-sieve | 4 0   | 5 0     |
| "  Muscat ...             | 2 0   | 3 0    | Raspberries, peck ...   | 3 0   | 4 0     |
| Greengages, ½-sieve ...   | 8 0   | 9 0    | "  lb. pnts., doz.      | 3 0   | 4 0     |

#### Average Wholesale Prices.—Vegetables.

|                         | s. d. | s. d.  |                          | s. d. | s. d.  |
|-------------------------|-------|--------|--------------------------|-------|--------|
| Artichokes, green, doz. | 2 0   | to 3 0 | Lettuce, Cabbage, doz.   | 0 6   | to 0 0 |
| "  Jerusalem, sieve     | 1 6   | 0 0    | "  Cos, doz. ...         | 0 9   | 1 0    |
| Batavia, doz. ...       | 2 0   | 0 0    | Marrows, doz. ...        | 1 0   | 1 6    |
| Beans, French, lb. ...  | 0 2   | 0 0    | Mint, doz. bun. ...      | 4 0   | 0 0    |
| "  broad ...            | 3 0   | 4 0    | Mushrooms, forced, lb.   | 0 8   | 0 9    |
| "  Scarlet Runners      | 4 0   | 5 0    | Mustard & Cress, pnt.    | 0 2   | 0 0    |
| Beet, red, doz. ...     | 0 6   | 0 0    | Parsley, doz. bnchs. ... | 3 0   | 0 0    |
| Cabbages, tally ...     | 5 0   | 0 0    | Peas, blue, bushel ...   | 3 0   | 4 0    |
| Carrots, new, bun. ...  | 0 2   | 0 3    | Potatoes, English,       |       |        |
| Cauliflowers, doz. ...  | 3 0   | 0 0    | new, cwt. ...            | 6 0   | 7 0    |
| Corn Salad, strike ...  | 1 0   | 1 3    | Radishes, doz. ...       | 1 0   | 0 0    |
| Cucumbers doz. ...      | 2 6   | 4 0    | Spinach, bush. ...       | 2 0   | 3 0    |
| Endive, doz. ...        | 1 6   | 0 0    | Tomatoes, English, lb.   | 0 4   | 0 5    |
| Herbs, bunch ...        | 0 2   | 0 0    | "  Jersey ...            | 0 3   | 0 3½   |
| Horseradish, bunch ...  | 2 6   | 0 0    | Turnips, bnch. ...       | 0 2   | 0 3    |
| Leeks, bunch ...        | 0 1½  | 0 2    |                          |       |        |

#### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                           | s. d. | s. d.   |                          | s. d. | s. d.  |
|---------------------------|-------|---------|--------------------------|-------|--------|
| Aralias, doz. ...         | 5 0   | to 12 0 | Fuchsias ...             | 4 0   | to 0 0 |
| Araucaria, doz. ...       | 12 0  | 30 0    | Grevilleas, 48's, doz.   | 5 0   | 0 0    |
| Aspidistra, doz. ...      | 18 0  | 36 0    | Hydrangea, pink ...      | 10 0  | 12 0   |
| Crotons, doz. ...         | 18 0  | 30 0    | Lycopodiums, doz. ...    | 3 0   | 0 0    |
| Cyperus alternifolius     |       |         | Marguerite Daisy, doz.   | 4 0   | 6 0    |
| doz. ...                  | 4 0   | 5 0     | Mignonette ...           | 6 0   | 0 0    |
| Dracæna, var., doz. ...   | 12 0  | 30 0    | Myrtles, doz. ...        | 6 0   | 9 6    |
| "  viridis, doz. ...      | 9 0   | 18 0    | Palms, in var., doz. ... | 15 0  | 30 0   |
| Ferns, var., doz. ...     | 4 0   | 18 0    | "  specimens ...         | 21 0  | 63 0   |
| "  small, 100 ...         | 10 0  | 16 0    | Pandanus Veitchi, 48's,  |       |        |
| Ficus elastica, doz. ...  | 9 0   | 12 0    | doz. ...                 | 24 0  | 30 0   |
| Foliage plants, var, each | 1 0   | 5 0     | Shrubs, in pots ...      | 4 0   | 6 0    |

#### Average Wholesale Prices.—Cut Flowers

|                           | s. d. | s. d.  |                          | s. d. | s. d.   |
|---------------------------|-------|--------|--------------------------|-------|---------|
| Arums, doz. ...           | 3 0   | to 0 0 | Lily of Valley, 12 bnchs | 12 0  | to 18 0 |
| Asparagus, Fern, bnch.    | 1 0   | 2 0    | Maidenhair Fern, doz.    |       |         |
| Bouvardia, coloured,      |       |        | bnchs. ...               | 4 0   | 5 0     |
| doz. bunches ...          | 6 0   | 8 0    | Marguerites, white,      |       |         |
| Carnations, 12 blooms     | 0 6   | 1 0    | doz. bnchs. ...          | 4 0   | 0 0     |
| Cattleyas, doz. ...       | 12 0  | 15 0   | "  yellow, doz. bnchs.   | 2 0   | 0 0     |
| Cornflower, doz. bun.     | 1 0   | 1 6    | Myrtle, English, per     |       |         |
| Croton foliage, bun. ...  | 0 9   | 1 0    | bunch ...                | 0 6   | 0 0     |
| Cycas leaves, each ...    | 0 9   | 1 6    | Odontoglossums ...       | 4 0   | 0 0     |
| Cypripediums, doz. ...    | 2 0   | 3 0    | Orange blossom, bunch    | 2 0   | 0 0     |
| Eucharis, doz. ...        | 2 0   | 3 0    | Roses, Niphetos, white,  |       |         |
| Gardenias, doz. ...       | 2 0   | 2 6    | doz. ...                 | 1 0   | 2 0     |
| Geranium, scarlet, doz.   |       |        | "  pink, doz. ...        | 2 0   | 0 0     |
| bnchs. ...                | 4 0   | 0 0    | "  yellow, doz. (Perles) | 1 0   | 2 0     |
| Gladiolus, white, doz.    |       |        | "  Generals ...          | 0 5   | 0 6     |
| bunches ...               | 3 0   | 0 0    | Smilax, bunch ...        | 2 6   | 3 0     |
| Gypsophila, doz. bun.     | 3 0   | 0 0    | Stephanotis, doz. pips   | 2 0   | 0 0     |
| Ivy leaves, doz. bun. ... | 1 6   | 0 0    | Stock, double, white,    |       |         |
| Lilium Harrisii ...       | 2 0   | 0 0    | doz. bun. ...            | 2 0   | 3 0     |
| lancifolium alb.          | 1 0   | 1 6    | Sweet Peas, white and    |       |         |
| "  l. rubrum ...          | 1 0   | 1 6    | coloured, dozen bun.     | 1 0   | 2 0     |
| "  longiflorum ...        | 2 0   | 0 0    | Tuberoses, dozen ...     | 0 3   | 0 4     |





## Feeding Stuffs.

This is the subject of an article in the Journal of the Royal Agricultural Society, and although it has been almost thrashed out before, there appears to be more than a little left for present discussion. The gist of the whole matter lies in the values given to the different constituents of the foods, and it is here where we may learn valuable lessons as to what should be the foods we buy. The three chief constituents of foods are albuminoids or nitrogenous foods, oil, and carbohydrates. The last are starchy, and in the digestible process sugary, and, therefore, fat-forming mediums. Oil is also fat-forming, but being more directly assimilated is less injurious to the constitution in proportion to the fat acquired. The albuminoids represent the lean meat portion of the diet, and these are the most important to young and growing animals. Fat and carbo-hydrates both represent heat, and when the weather is cold and shelter scanty these must be liberally supplied to all kinds of stock; but for growing animals the albuminoids are the most important. When full growth is attained, the fattening foods may usefully be increased to the utmost digestible capacity. It is here that linseed cake asserts itself, for there is no food of which an animal can consume so much and retain health. Wheat, Barley, or Maize meals are fine feeding stuffs, but not being so digestible as cake may easily be overdone. When they are used they should be strictly limited in quantity, and increased very gradually; whilst they should never be used except in conjunction with linseed cake. This rule is subject to one other exception. Meal may be used alone, in small quantity, to give a taste to a ration of cut straw or low class hay which is being fed to poor backward drapes or bullocks which would not pay for a more expensive ration until they get into a more thriving condition.

Those graziers who use the greatest amount of foresight in attempting to get a profit on their grass, buy their cattle in late autumn or early winter, when markets are full. They are not particular as to condition. A good bill of health and a low price are indispensable. The animals' heads must not before grass time be swollen, metaphorically, to such an extent as to leave no room for profit. Therefore the expense of wintering must be kept low, and the smallest possible quantity of bought food be used. It is here that grain meal is so useful, because such a small quantity suffices to give a lick to any coarse food which may be available. This, of course, only applies to animals of mature age which have got into low condition. The starch in the meal moderately used represents the cheapest form of heat production for the purpose. If you have cattle in an improving state, that is what dealers call "fresh," they will pay for a more expensive diet, as well as a more generous one, and it is then that you will have the greatest need for care in the choice and proper mixture of the various constituents. As the ration is increased, we must keep digestion closely in view, and the increase must be chiefly in the most digestible portion. Therefore the grain meals, whether they be of Wheat, Barley, or Maize, must be increased in very slight degree, if at all, and the additions to the cake proportion consist principally of linseed.

There is one, and a serious, objection to the lavish use of linseed cake, and that is, that although it is a most useful, and we might also say indispensable, food for stock, it is a relatively dear one. It is the very safety and reliability of it which creates a strong demand and a more or less artificial value. But there are other alternatives to the use of linseed cake. A very large number of farmers have a strong prejudice against decorticated cotton cake, because it is very hard and difficult to break; but as a ton of decorticated cotton is as good as a ton of linseed cake as a food, and

superior to it in its manurial value, these farmers are standing in their own light when they allow such a small difficulty to stand in the way. Manufacturers have essayed to conquer old prejudices by putting decorticated cotton meal finely ground on the market. As it is, or rather should be if good, very rich in oil, it is most suitable to give to either growing or feeding stock, and a small quantity would be an excellent substitute for Maize, Wheat, or Barley meal used to give a taste to common fodder. Good decorticated cotton cake may contain as much as 15 and 16 per cent. of oil, and it has a decidedly laxative effect on the bowels, so is not suitable for consumption on grass, but as part of a combination of meals and cakes it makes a very efficient substitute for the linseed cake which costs 20s. to 25s. per ton more money.

Farmers must remember that it is the hardest kind of decorticated cake which contains the most oil, and soft cakes which are easy to break may be of far less value. We have made extensive use of decorticated cake, and generally put it through the breaker twice even for cattle. Decorticated meal is a little lower in price than the cake, and also saves the labour of breaking; but, as a rule, it does not analyse so well. Perhaps the mill is useful in hiding impurities. It is also unsuitable to give by itself, but is most useful to mix with cut meat or chaff for cattle. For sheep there is the objection that it is wasteful in windy weather unless the chaff or chop is well damped before the meal is mixed with it. If a regular supply of chaff is given to sheep, an equal allowance of decorticated cake or meal and malt culms, say  $\frac{1}{2}$  lb of each per head per day, forms the best addition in our opinion for use in the Turnip fold. The cost is moderate. It is a good food, whilst the residual value is the highest possible in proportion to the cost.

As soon as you increase your ration of concentrated foods, a proportion of linseed cake must come in, and for heavy feeding a variety in combination is absolutely necessary. Three pounds per head for bullocks,  $\frac{1}{2}$  lb for sheep per day is as much as should be given of any one food for winter feeding. It is quite different when stock are on grass in summer, when an allowance of 14 lb per bullock is not at all uncommon, and often most profitable.

## Work on the Home Farm.

There will be no harvest on the 20th, which was the date we had fixed. If the present cold and wet weather continues we may be almost in September before we begin. On two mornings recently there was something very like a frost on the grass at sunrise. Cloudy skies and cold drizzling rain are excellent for the aftermath and root crops, but not so for the corn. A month of real summer is badly needed now. It will be a thousand pities if such an excellent prospect is ruined for want of sunshine.

Wheat stands up well and Oats generally also, but much Barley has been laid and twisted about lately, so farmers are wondering how the binders will work. It is some time since they were set such a task. As a fact, this is the first severe test to which some of the newest machines have been put. Much more manual labour will be required this year, and regular Irish visitors are being invited to bring others with them. As the Potato harvest will follow closely after the corn stacking, there is the more inducement for Irishmen to come over.

The August fairs have commenced, and so far they have been decidedly slow. Prices are fairly high, but little trade has been done. Notwithstanding the plethora of keeping, and the prospect for roots, there are more sellers than buyers amongst farmers. Money is very scarce indeed amongst them at present, but as soon as thrashing begins we expect to see a boom in the sheep trade. Lambs from 24s. to 34s., and gimmers for breeding at 40s. leave plenty of room for profit at Michaelmas. Clover are a fine plant if the crops are not smothering them, and sheep will be wanted as badly next spring as in the autumn.

Some of the Turnips require another skerrying which they will have at the first dry opportunity. They may require a little more weeding, but the later Turnips have been singularly free from weeds this year. There has been too much work of that kind amongst Mangolds and Swedes. Both crop and weeds grew so rapidly after the striking out process that the final cleaning has been difficult. Piece-work men lost by the cleaning everything they had gained by the hoeing, and they complain that they have not made day wages. They should be able to demand a good harvest month to make matters straight. We are having the saddler and his men to repair the gearing, now the horses are taking a rest.

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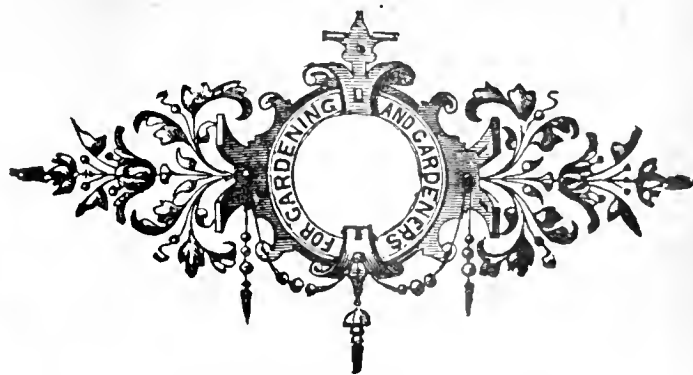
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## Journal of Horticulture.

THURSDAY, AUGUST 21, 1902.

### Using Artificial Manures.



OF late years gardening has made wonderful progress, but in one thing gardeners have lagged behind, namely, in knowledge of the use and application of artificial manures. The various mixed garden manures and special fertilisers offered by the different firms are of great value, but they partake a little too much of the quack doctor's cure-all. The numerous plants a gardener has under his charge have very different requirements, and a study of them is not only profitable but extremely interesting. Speaking broadly, farmers know what special fertilisers their crops require, then why should not gardeners? All plants require mixed manures, but in the mixtures for Wheat, Oats, and Barley, and plants of the same class, nitrogenous manures predominate; for Turnips and Swedes, phosphatic manures; for Potatoes, potassic and nitrogenous manures; for Clovers and Leguminous plants, phosphatic and potassic manures; for Mangolds, nitrogenous manures and salt, and so forth. If gardeners had their crops roughly mapped out in the same way it would be advantageous to them.

The matter is not, however, so simple as looks, for even in manures of the same class there are great differences. Take the two nitrogenous manures in most regular use, namely, nitrate of soda and sulphate of ammonia. Although they supply the same kind of plant food, namely, nitrogen, they often act in a widely different way. Sulphate of ammonia, though the richer of the two, is much slower in making its presence felt, and its specific action appears to be to develop the flower and seed. Nitrate of soda, one of the quickest manures at our disposal, on the other hand, appears to develop the leaf and stem. Herein, then, is room for great diversity

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.



in practice. Plants may be assisted or damaged by the manure used according to the purpose for which they are grown. Nitrate of potash, better known as saltpetre, is a quick-acting, valuable manure when applied in small quantities. It supplies not only nitrogen, but potash, two elements of plant food often deficient in soils.

The best general artificial manure is genuine Peruvian guano. It contains all the different kinds of plant food usually lacking in soils, and in such form that they become available as the plant requires them. In poor or worn out soils it is a manure that can scarcely come amiss. There is great choice amongst phosphatic manures. Bones, raw, dissolved, boiled, and steamed; mineral superphosphates; basic slag; phosphatic guanos, and others. Ground raw bones are slow in action, but promote healthy growth; dissolved bones are quicker, but do not usually give such sturdy growth. Steamed bonemeal and flour are intermediate and valuable. Mineral superphosphate hastens the maturity of plants, and gives bright, clean growth. Basic slag is the slowest of the lot, and, containing a large percentage of free lime, is excellent on sour soils; in these it neutralises the acid vegetable matter, and induces healthy growth.

Potassic manures include muriate of potash, sulphate of potash, and kainit, the latter being commonest and cheapest. Wood ashes also contain a considerable percentage of potash. Potash is said to assist in the formation of starch, hence its value. It is usually on light, sandy soils that this class of manure is most effective, clay soils being comparatively rich in potash. There are, under these, many manures that cannot be mentioned in the space at disposal.

There is one more aspect of the question to be briefly discussed, namely, Have artificial manures, or chemical substances, much influence on the colour of flowers? We know that iron gives us blue Hydrangeas; manganese is said to deepen the tint of blue flowers, and generous feeding brightens the colours of some others. Beyond this our knowledge is circumscribed. It is, nevertheless, an interesting question, and deserving of more inquiries and experiments than have yet been extended to it. If these few remarks draw attention to artificial fertilisers, they will have served their purpose.—W. P.

## Rambles in Switzerland.

Not being gifted with either Musel's cloak or Fortunatus' hat, I had to pass over some seven hundred miles of land and sea before I reached the point where I was to be introduced to "the Merry Swiss Boy" and his surroundings. Now, that boy is no common boy, and he cannot be a common boy—of course I speak of a generation, not of an individual—who is born and passes his life in such a mountain land. I will not pause to argue over the why and because, but I rest upon the fact that the people of the mountains are everywhere superior to the people of their neighbouring lowlands, both mentally and physically. The Dutchman has a large posterior development, but the Swiss has a muscular leg and arm and an elevated cranium. Look at the clusters of Swiss boys, each with his knapsack, passing on, morning after morning, from every point of the compass to the canton-sustained school of the district; and from these clusters you may deduce another evidence—universal education—why a Swiss is intelligent and free.

I certainly feel equally free of pen, for when I dipped mine into the ink it assuredly was with no intention to dwell upon Swiss boys and their education, but to have made no pause until I came to my recollections and notes of Zurich. Well, here I am beneath the trees at the end of the garden of the Baur au Lac, and looking upon the lake's blue water and its bright green, villa-dotted banks. There are three English ladies and one Swiss lady near me; and this one last-named reminds me that the girls and women of this land are also physically and intellectually superior to the females of lowland countries. Let one instance suffice. A Swiss lady, evidently a governess commencing her annual holiday, was in the same railway carriage with me. We crossed the Channel together, went on to Paris together, and there I

thought that mind and muscle demanded rest; but not so my companion. The Ranz de Vache had a spell over her, and on she went to travel without a resting over some more hundreds of miles, until she had reached the land of her birth. Well, God speed her! But before I pass from the remembrance of her fair face, and mind as fair, let me record that it is a delusion to believe that a Ranz de Vache is one especial and universally accepted melody. Every district has some favourite air, and that is its Ranz de Vache.

And now, if I can restrain my thoughts from further vagrancy, let me dwell upon subjects more consonant with the special topics of your pages. No, it cannot be; for I must jot down first something about that John James Scheuchzer whose "Itinera Alpina" is the first published of Swiss guide books—and a strange book is it. He was a professor at Zurich, this very place where my Swiss notes begin. Some ignorance of the district around does he betray, yet both he and his brother John—rare fraternity in science—were superior botanists. John devoted himself especially to the study of the Grasses, and John James to the study of alpine plants; and they are most aptly commemorated by the genus Scheuchzeria, for its solitary member is of grassy habit and of alpine birth. John James was a native of Zurich; he was its special physician, its professor of mathematics, and there he printed and published nearly all his numerous and voluminous works. Most of these works have one peculiarity—wherever an engraving could be possibly introduced, there one, however irrelevant and unneeded, is introduced. Thus in his "Physique Sacrée," or Natural History of the Bible, having occasion to quote the Psalm, "Who can endure the cold of the Lord?" is inserted a picture of about twenty men who suffered severely in the ice; and an allusion to some coin enabled him to add engravings of medals he had collected! Peter the Great endeavoured to lure him from his native land, but the Senate of Zurich prized Scheuchzer too highly to permit his departure. They bestowed upon him honours and stipends, and thus detained him until he died in 1733 among his fellow citizens.

His "Itinera Alpina" does not differ from his other works in having numerous illustrations, and the most interesting is his own portrait. An inscription beneath each reveals that they were added at the expense of his friends, and it startles at first to find that our Sir Isaac Newton thus contributed some, and that the portraits of plants were paid for by our botanists Bobart, Lhuyd, and Dale. With no faint interest did I examine the specimens collected by the Scheuchzers, preserved and labelled in their own handwriting, in the herbarium attached to the Zurich Botanic Garden. This garden was established in 1560 by him who has been well named "the greatest naturalist the world had seen since Aristotle," Conrad Gesner. His collection of dried plants has been mentioned as preserved here; but it is not, nor could I learn that it had been ever, deposited in any of Zurich's public museums.

This town, like our Norwich, has been fertile of botanists, besides many high masters of many other sciences; but I will dwell only upon one other, who, like Gesner, was one of the most lovable of men—Lavater, the physiognomist, who needs no other testimony than that he would not reveal the name of his assassin, and, perhaps, it is an evidence that his countrymen think he needs no eulogy, that there is no other epitaph over his grave than this, in the obscure churchyard of St. Anne:—"J. C. Lavater's grave. Born 15th Nov., 1741. Died 21st Jan., 1801." I might not have noticed this true personal illustrator of charity, had not I long pondered over the physiognomy of organised forms which Lavater has left unnoticed—plants. They have had, however, their Lavater, for Humboldt wrote "Considerations on the Physiognomy of Plants"; but he and his disciples have confined their comments to the features imparted to a country by the plants which are there specially predominant. The Palmæ, Musacæ, Piperacæ, and Scitamineæ impart a physiognomy to the tropics, totally differing from that imparted by the Abietinæ of northern latitudes. But we might, I think, go some steps further; might detect the internal qualities of plants from their physiognomy. When we see a plant having the form of a Grass, whether it be a pigmy, as the Poa annua on our gravel walks, or 50ft high, as in the Bamboo, we know that starch predominates in its seeds. Again, in the large natural family of the Rosacæ, is there one fruit that is unwholesome, or one that does not contain malic acid?—W. J.

(To be continued.)



**Lælio-Cattleya × Adolphus superbus.**

Our illustration this week presents a very attractive big-neric hybrid, whose merits secured for it a First Class Certificate at the Royal Horticultural Society's meeting in the Drill Hall on August 5. Messrs. Charlesworth and Co., Heaton, Bradford, were the exhibitors. The flowers are of waxy appearance, and the sepals and petals of a bright reddish-orange colour. They are further spotted with ruby tint, and the lip is purplish-rose on the side lobes and at the tips, and there are lines of yellow on the disc. The parents are *Lælia cinnabarina* and *Cattleya Acklandiae*, and the hybrid takes after the latter in general habit.

**Liquid Manure for Orchids.**

Liquid manure is not generally given to Orchids, but it is a question if great numbers would not be benefited if it were. Peat is too much used under the mistaken impression that it yields something beneficial to the plants. We do not say that peat should never be used in Orchid culture, for we know that great numbers require some such material; but we feel assured from experience, that great numbers would be much better without. All Orchid growers admit that decaying peat is an evil; but few seem to understand that only decaying material can yield plant food. A friend, who has on more than one occasion brought us plants from the East Indies and elsewhere, tells us that all the good roots he has seen on Orchid plants in the wild state were either attached to fresh hard bark, or growing among living vegetation, or dangling in the air. He also assures us that many, or most of the kinds which grow on trees, are fed with liquid manure naturally. He has almost invariably found the branches of the trees bespattered, often plentifully, with the excreta of both birds and mammals. This is washed by rain within reach of the roots of the Orchids, and we cannot doubt that they are thereby benefited. Is not this a hint worth thinking about? Orchids, however, are not to be tampered with, but we are sure that weak liquid manure applied to those plants which have filled their pots or baskets completely with healthy roots helps them greatly, as in the case of *Cypripedium insigne* and many others.—A.

**The Dendrobium.**

The genus *Dendrobium* is deservedly one of the most popular in the Orchid family, containing as it does, a very large number of exquisitely beautiful species, usually of easy culture and presenting a flowering return when compared with their size far in excess of most other kinds. Many, indeed, are quite indispensable in collections, every known species is worthy of culture, and every month in the year is graced by their lovely blossoms.

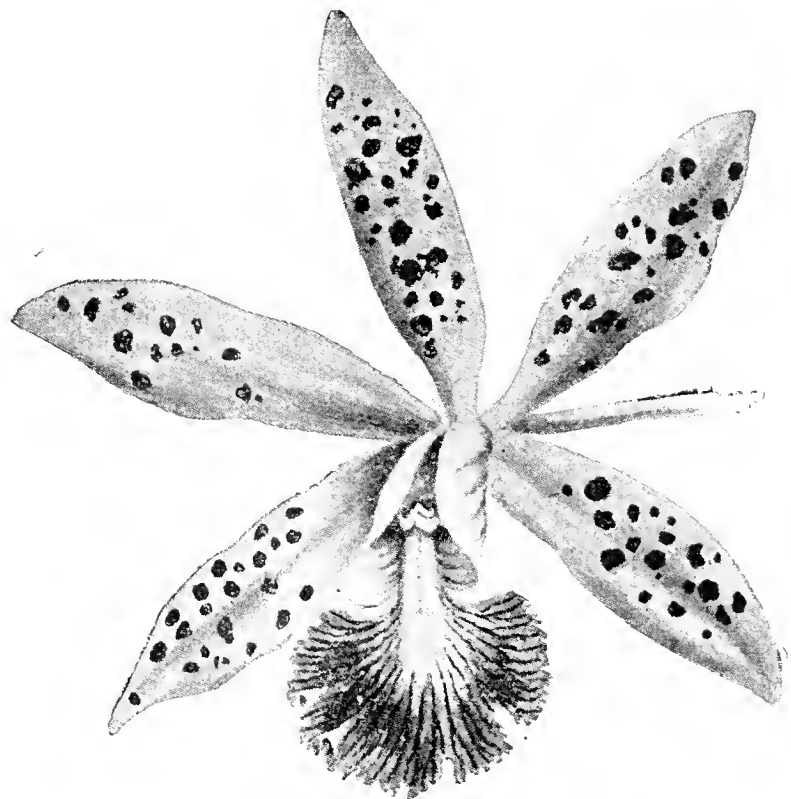
For cultural purposes one may almost group the species under four headings. The first would be the deciduous sorts, of which *D. Wardianum*, *D. crassinode* and *D. Bensoniæ* are well known examples. The evergreen sorts such as *D. densiflorum* and its allies would form the second group. *D. fimbriatum* and others of the nigro-hirsute section would form the third, while the fourth would consist of the Australasian sorts generally, as *D. bigibbum* and the lovely *D. phalaenopsis*. But although these sections of the genus are fairly distinct, the species in some cases overlap and run into each other, so to speak, yet it is, perhaps, the best that can be done in the way of classification.

The first section require a great amount of sunlight, heat, and moisture to encourage, develop and properly consolidate the long cylindrical stems that are their characteristic. Very few of them have any liking for a great thickness of compost, but all delight in having their roots crowded together in very small receptacles. I have had *D. Wardianum* in small pans and halves of cocoa-nut shells grow over a yard in length, with stems of good thickness throughout, that in their season were wreathed with the lovely blossoms and strikingly handsome.

Clearly then, it is not the amount of compost they need to make them satisfactory. But firmly fixed they must be on the home of their adoption. There must be no rocking about in the pans, or the roots will not be able to take hold of the compost, and the plant will be weakened. It is best to tie them firmly to stake the first season, and allow the growths made to attain their natural horizontal, pendant or upright position, according to the habit of the individual species. Then when these root in their turn, the whole plant will be naturally and firmly established. This may seem to many a small matter, but only those who have had a few years' experience know how imperative it really is.—H. R. R.

## Indian Mangos.

During my latest visit to England I noticed articles about Mangos in the newspapers, and I saw some fine fruit of a good Bombay variety (Peary or Peter) in a shop near New Street Station, Birmingham, priced 4d. each. This fruit would cost that in Bombay market. I also heard of consignments of fruit being sent from Bombay, but I never knew if the venture was profitable or not. I think the ordinary English fruit eater is tempted more by the cheapness of a new fruit than by its looks, and very few would give 4d. even, except for curiosity, and a Mango being a fruit most difficult to judge of the stage of its ripeness, the probability is the buyer would not waste another 4d. on such fruit. On the other hand, he might perhaps get a really good one, and if he did he would never forget it. It will be a long time before Mangos can be landed in England for 1d. each. That is about the price paid in Mango districts here in India, six rupees a hundred. With Mangos all depends upon the stage of their ripeness. If too ripe, a rotten Turnip is better; or, if too unripe, the "tow and turpentine" is predominant. They are even worse than Melons to judge of the proper stage of ripeness in which to eat them, and one day too much or too little makes all the difference in



**Lælio-Cattleya × Adolphus superbus.**

flavour. Then again England, except on very hot days, is not the country to eat Mangos in. A hot day, about 90deg in the shade, and a fine ripe Mango just taken off the ice after breakfast, in the morning, is a thing one will never get in England as we do in India. So the Mango stands a poor chance of ever becoming a favourite in Great Britain or a profitable fruit to send; and until the vendor of the fruit knows exactly when as to ripeness and what variety to sell his customers, the chance of the Mango is, I fear, not much.

There are many people, however, living or travelling abroad who would like to know the names of the best varieties. The following list may also conjure up pleasurable remembrances in many readers in England, old residents in India, who had their garden and favourite Mango tree.

Mangos in India are propagated by inarching, which is the best method when properly done. It does not matter much with the native gardener if a bit of string is left on or two inches of "snag" is left to grow over. One of his reasons for having a "graft" is because it "bears better." The "bit of string," or the rotten end of the stem, is not taken into consideration. Grafts made as they are made here would never live in England; but in this country Nature repairs a lot of bad carpenter's work in the way of inarching, and even from Government gardens, where professional Europeans superintend the work, the "grafts" are just as bad as it is possible to make them. Seedlings give good results if seed is properly selected, and I would advise intending planters in the Colonies to import fruit and sow the seeds in layers, in trays of soil, instead of buying "grafts," which in some localities are "made specially" for the market, and consist of two seedlings tied together. Verily the ways of the native gardener "are peculiar."

The general idea in India amongst Europeans about Mangos is that there are four good varieties—Bombays, Maldahs,



Lengcras, and Budays. These names really mean four large classes of fruit, and the sub-varieties of each are endless. I myself collected over 500 varieties in Durbhungah, in North-West Bengal, one of the homes of the Mango. The Budays are of all shapes, and ripen in the month of Bhádon, the fifth month of the Hindu year. The Budays are very little known, and are seldom seen in the bazaars. One of the best, named "Fuzhe," can be bought in Calcutta in September, sometimes at about 8d. each; it is a large, fine fruit, weighing often 2lb each. Most of the good varieties of Budays fetch from six to ten rupees per 100 in Durbhungah Bazaar, where they are plentiful.

Some of the terms used in my description of the fruit are curious. "Nák," or nose, is the native name for the point where the pistil was situated on the young fruit when it was in the flower, and where also the root comes out of the seed.

During my seven years sojourn in Tirhoot, the "Garden of India," I collected all the finest varieties of Mangos in India, most of which were planted in the Maharajah of Durbhungah's grounds. The Mango season lasted for five months. We had one variety, a perpetual bearer, called "Baramassia," or the "Twelve months" Mango, always flowering and fruiting, but it was of very inferior quality.

Mangos in damp, wet countries grow best on mounds. They will also grow, it is true, in a swamp, but raised ground well drained is best. In dry, hot places you cannot irrigate too much during the hot months, always drying them up for three or four months after the rains, if possible. I have often seen fruits hanging on the tree with a root hanging out of the fruit, having germinated as it hung.

Most of the good varieties are accidental seedlings. No attempt has been made in the selection of seeds, except in Durbhungah. I left before I saw the results of experiments made there, and am afraid no one cared to keep up the experiments. Akbar, the great Mogul Emperor, and his generals did a great deal to plant India with Mangos. So says an old Mahomedan gentleman, a friend of mine. There remain still near Durbhungah many trees of what is called the "Lac Bagh," or the garden of one hundred thousand trees. Those I saw were 4ft to 5ft in diameter—immense trees 45ft apart. Akbar reigned 1556-1605, and he left his mark in Mango gardens all over Northern and Central India, as well as on the coins. What a difference this to the temper of people nowadays! Most people would say: "What is the use of planting trees? I shall never see them grow up and fruit." But all the same, they are thankful for these lovely, shady groves Akbar planted, particularly when they are in camp on a hot day.—C. MARIES, F.L.S., V.M.H. (in "Journal of the Royal Horticultural Society").

## Notes on Conifers.

I have given in previous articles a short description of the Conifers that are known to me, or, rather, those which I have had actual experience with. I should now like to make a few remarks upon planting. We have a long season in which this operation may be performed, viz., from September to April. This is both earlier and later than some recommend; on the other hand, I have heard it said that the two months just named are the best for this purpose; but so much depends upon circumstances. In a general way, however, from early in October to the end of March is a very good time, and this will give us half the year in which we may plant, providing the weather is suitable.

A few years ago I transplanted a number of rather large specimens about the last week in April, it being very warm and dry at the time, and some of the trees had to remain out of the ground a day or two; but the roots were carefully protected. As soon as they were planted a good soaking of water was applied, and several times subsequently, with the result that all grew; they are now healthy specimens. Perhaps it is only fair to say that the majority of them were good trees to deal with, most of them being *Retinosporas* and *Cupressus Lawsoniana* in variety. Where it is simply a case of planting home grown trees, the operation may be safely performed all through the month of April, especially if a little attention is paid to them in the matter of watering. The danger of late planting comes in when the plants have to come from the nursery, and remain several days perhaps out of the ground, and the roots get very dry. In such cases it is a good plan to dip the roots in water before planting. April is often a better month for planting than March;

during the latter month we often experience very cold and drying winds. This is very unfavourable weather, not only for Conifers, but for planting in general.

Some authorities consider autumn the best season to plant, and in the case of deciduous hardwood trees I have found it to give the best results. With Conifers, however, I have had equally, if not better, results from spring planting, an instance of which has already been mentioned. One great drawback to autumn planting is that the soil is often very dry at that season. It has been notably so of recent years after the very hot and dry summer. Some two years ago I wanted to transplant a few large specimens of *Retinospora plumosa*, but found the soil so very dry that the work could not be done without a great deal of labour. Where it is really necessary to plant under such conditions, a few good soakings of water should be given the trees a few days previous.

Although Conifers may be planted at any time during the winter, weather permitting, I think they do not stand so good a chance as those planted in early autumn, or in spring. In the former case the soil is warm, and the trees become somewhat established before the cold weather sets in; whilst those planted in spring will also be safe from severe frosts. When planting takes place in winter, and is followed by a long spell of frosty weather, the trees are often much injured, and sometimes permanently disfigured.

After it is decided when to plant, it is not always an easy matter to arrange where to plant. The difficulty is not so great, perhaps, in planting single specimens, as it is when a border, bed, or groups have to be taken in hand. In the latter case, much care and forethought are needed, or very likely when the trees are grown up and require thinning, it will be rather difficult to decide which to remove. A little time spent in preparing a plan is not wasted, and will often prevent a great deal of bother later on. When planting a border, or bed, the kind of trees that are intended to occupy permanent positions should be decided upon, and suitable positions marked out to receive them. When these are put in, others may be planted amongst them, to give a more furnished appearance to the bed. Planted in this manner, there should not be much difficulty experienced when thinning out requires attention.

Holes large enough to receive the trees should be made, so that the roots may be laid out their full length, and not cramped up, or turned upwards, as is sometimes done in planting trees. Very often most of the roots will be on one side of the stem, especially if they have not been frequently transplanted. When this is so, some of them should be carefully brought round as far as possible without injuring them, so that the tree may the sooner become established. It is a good plan to put the strongest roots to the most exposed side; by this means the plant will be better able to stand against the strong winds.

In planting large specimens, it will often be found necessary to stake them, especially those having small roots in proportion to top growth, such as many of the Pines and Firs. The best way to do this is to drive a stake well down in the bottom of the hole. In planting put the stem of the tree up against it, and secure the two with strong tar band. Some protecting material should be put between the stake and the stem. The former need not be more than 2ft or 3ft above the ground line, according to the size of the tree. There is nothing unsightly in staking trees in this manner, and they will last until the trees become firmly established. A good watering should be given, especially when planting in spring, and should be repeated several times, according to the state of the weather. A mulch of litter or lawn mowings is very beneficial during the summer, although it may be considered untidy.—PINUS.

## The Hops.

The Hop crop is unsatisfactory, and the prospects grow less and less reassuring as the season advances. The longer the sunshine and genuine warmth are deferred the poorer become the chances of a full and valuable crop. The cold weather in May and June settled the fate of the crop so far as the weight of the yield was concerned. The hopes of the growers are now centred on the quality of the fruit, but present appearances are by no means reassuring. The aphid blight has also contributed to make the situation worse. The market will probably be favourable to the seller, especially if the Hops are of good quality.

## NOTES

## &amp; NOTICES

**Death of Mr. James Parr**

The death took place at Rose Cottage, Barton, August 15, of Mr. James Parr, who has for several years been secretary of the Patricroft Linnæan Society, and who as a botanist was well known throughout the district. He was a large grower of Chrysanthemums.

**A Visit to Swanley.**

Sir J. Leige Hulett, Speaker of the Legislative Assembly of Natal, and Lady Hulett, paid a lengthy visit to Messrs. Cannell and Sons, Swanley Nurseries, recently. They were intensely interested with what they saw, and left an order to be despatched at once. They propose having a visit to the firm's Eynsford Nursery later on, and making an exhaustive examination before leaving for South Africa.

***Arnica montana.***

The deep orange-yellow flowers of the midsummer flowering border perennial are always a source of attraction, and, judging from the specimens sent in to us, it is considerably grown, but not generally identified. The height of the plants does not exceed 2ft, and the growths terminate in solitary composite flowers. Its culture is of the simplest, and one established in any friable soil. We have not experienced any lack in its vigour or alteration in its general freedom of habit. An illustration is afforded on another page.

**Carnations from Swindon.**

Messrs. Davis and Son, nurserymen, &c., Bath Road, Swindon, have forwarded to us a boxful of Carnation and Picotee flowers. We will not trust ourselves to apply names to these Florists' Flowers, but we can, at all events, admire and commend the quality of most of the blooms before us. In nearly all cases they are firm, fragrant, deeply coloured, full and evenly built, and of good size. The light-edged Picotees are specially tasteful. The collection otherwise includes selfs, yellow-ground Fancies, flakes, and fringe-edged selfs.

**Cardiff Gardeners' Outing.**

The members of the Cardiff Gardeners' Association held their annual outing to Highbury, Birmingham, the seat of the Right Hon. Joseph Chamberlain, M.P., on Monday, August 11. The party, numbering sixty, left Cardiff in saloon carriages at 6.25 a.m., reaching Ye Old Royal Hotel at 12.30, where an excellent dinner was in readiness, and was thoroughly enjoyed. The toast list was a brief one, the loyal toasts being given by Mr. F. G. Treseder, who presided. The next toast was that of the Right Hon. Joseph Chamberlain, M.P., submitted by John Julian, hon. secretary, who said how deeply indebted they all felt to that gentleman for his courteous consent to their visiting his beautiful place. The "Cardiff Gardeners' Association" was submitted by Mr. Bishop, and responded to by Mr. C. E. Collier, chairman; Mr. Thos. Malpass, hon. treasurer; and Mr. John Julian, hon. sec.; and that of the "Visitors," "Chairman," and "Host" followed. A move was then made to Station Street, where a special steam tram was in waiting to convey the party to near Highbury. Messrs. Deacon and Mackay were in waiting at the entrance to escort the members round. The contents of the numerous Orchid and other plants and fruit houses were greatly admired, as was also the beautiful pleasure grounds, such a spot as one may well imagine that Mr. Chamberlain so much enjoys in quietude when not so greatly occupied with State affairs. Mr. Deacon referred to the lateness of the season, and certainly various subjects showed that they had not been favoured any more in regard to sunshine than we had been in our own neighbourhood. On completing the tour round the gardens, a vote of thanks was accorded Messrs. Deacon and Mackay for their courtesy. The party then made a move to visit their friends in town, leaving Birmingham at 11.30, and reaching Cardiff at 4.30 a.m. Tuesday, having enjoyed one of the most successful outings the Association has ever had.

J. JULIAN, Hon. Sec.

**Peaches from Byfleet.**

A contribution of Peaches, which has become an annual offering, reached us during the week from Mr. G. Carpenter, The Gardens, West Hall, Byfleet, Surrey. The fruits were nicely flavoured, and betokened careful culture.

**The Victoria Regia.**

A specimen of this at the Botanical Gardens, Old Trafford, Manchester, is at present showing leaves 7ft in diameter, and the curator has been creating a local sensation by taking his position upon one of them, seated in a chair. Of this the "Daily Dispatch" publishes an amusing illustration.

**A Mysterious Insect.**

In the Canton of Tessin, known as the fruit garden of Switzerland, thousands of fruit trees have been destroyed by a plague of parasites. The orchards at present look like withered forests, as all the fruit trees have been eaten up by this unknown insect, which first introduces itself into the leaves and appears to live on the sap of the tree. All remedies have proved unsuccessful in destroying the insects, and once attacked the tree is doomed. Many fruit growers have been ruined this year, and the plague seems to be spreading to the neighbouring cantons. The local authorities have invited experts to make a report as to the nature of the insect, and to find a remedy if possible.

**A Brazilian Botanist.**

Professor Barbosa Rodrigues, director of the Botanical Garden of Rio de Janeiro, has arrived in England. The Brazilian Congress has voted a considerable sum for the printing of his work, "Sertum Palmarum," in which he describes 160 species of Palm trees, entirely new, and discovered by himself in his journeys in the interior of Brazil for more than thirty years, the letterpress to be accompanied by large coloured plates drawn in the places where each species grows spontaneously. Senhor Barbosa Rodrigues has been received by the authorities at Kew Gardens, and has been asked to look over the classification of the living Palms in the hothouses as well as that of the exsiccata. In the course of his examination he discovered a hitherto unclassified species, brought from Goyaz in 1892, which he named *Astrocaryum Kewensis*.

**The Leeds Parks.**

The Leeds Corporation have just completed an interesting competition amongst the park gardeners, which, so far as is known, is entirely novel. The idea will serve to direct greater attention to the magnificent displays to be found in so many of our public parks, and the occasion may also act as a reminder of the enviable position which Leeds occupies in the matter of park equipment, a position which may almost be regarded as unique. In the city there are no fewer than twenty-two parks and recreation grounds, averaging about three to every ward. In the aggregate, the land acquired in this manner extends over an area of over 1,200 acres—more than a twentieth part of the area of the entire city—though about 350 acres are utilised in other ways. Including the £10,900 given by Colonel North in connection with the acquisition of Kirkstall Abbey and grounds, the actual cost of this immense area, from the purchase of Woodhouse Moor, so long ago as in 1857, to the opening of the parks at Potternewton and Harehills last year, is, in round figures, nearly £500,000.

**The Yorkshire College.**

The authorities of the Yorkshire College, Leeds, have issued a nicely got-up and beautifully illustrated brochure on agricultural education in Yorkshire. Judging from the letterpress and illustrations in this booklet, the agricultural department of the Yorkshire College is excellently equipped with buildings and stock. The course of instruction given at this centre has been well designed, and is of an eminently practical character. The County Councils of Yorkshire have made liberal provision for supporting agricultural education in Yorkshire by means of scholarships for selected students at this college. The course of dairy instruction at the college is also well looked after, and, as now arranged, any Yorkshire students who desire instruction beyond that given in butter-making at Garforth may attend the classes at the Midland Dairy Institute, while, conversely, any students from the Midland Dairy Institute who want short courses in agriculture can come to the Yorkshire College. The Yorkshire College undoubtedly possesses great advantages as a centre of agricultural education.



## An Evening with the Microscope.\*

(Continued from page 128.)

The microscope is used more or less in almost every branch of science; in fact, it is unquestionably one of the grandest scientific instruments ever invented, and we find the makers catalogue their different instruments suitable for physiology, pathology, bacteriology, zoology, biology, botany, brewing, chemistry, agriculture, petrology, metallurgy, engineering, &c. From a gardening point of view, the wide field of study in the various forms of either plant, fungus, or insect life is far too extensive to thoroughly explore, except by a specialist, as the practical gardener's duties, as a rule, are far too onerous for him to afford to devote any great amount of time to this hobby. Still it is very desirable that all should have some knowledge of the uses of the microscope, and the advantages of the same for gardening purposes.

In ordinary practice, as I have already stated, the pocket lens is sufficient for our requirements, as with it the gardener can examine the construction of the flowers if he wishes and classify them in their various natural orders; or he can find out the presence of his enemies, the insects, in their early stage, and thus adopt remedies before they have too well established themselves to prove too injurious to plant life. But for the examination of the structure of the growth of trees and plants, or the analysing of insect life, something more than an ordinary pocket lens is necessary. To examine the beautiful composition of growth, for instance, whether in cross or vertical sections, or whether transverse or longitudinal ones, a microscope fixed on a firm stand becomes absolutely necessary. It is desirable that the stems of such subjects should be perfect, and also small in dimensions, or otherwise cut into segments to show the perfect growth, i.e., the outer and inner bark, the medullary rays, the pith, the ducts, woody fibre, &c., so that the full composition of the stem is secured on the slide. To give a list of all plants or trees suitable for mounting, and which gives a great variety of construction and interest, would be simply to write out a long catalogue, as the whole of plant life is suitable for microscopy. I may, however, mention the common Lime, Clematis vitalba, Black Pepper, Chicory plant, Cebœa scandens, Aristolochia, root of the Thistle, root of Aërides, stem of Pteris aquilina, leaf stem of Cycas revoluta, Bamboo, Sugar Cane, stem of Nettle, leaf stem of Nuphar lutea, and hundreds more make very good examples for the microscopist, whether mounted in vertical or transverse sections.

The pollens of flowers when viewed under the microscope are very beautiful and interesting. Probably none are more so than the Hollyhock, Marsh Mallow, Arum, Poppy, Cebœa scandens, Sunflower, and that of the Scotch Thistle, for although hundreds more could be added, comparatively few are beautiful. Seeds when mounted as opaque objects are also well suited to the microscope, but do not give so wide a field of variety and interest.

So, likewise, Fern spores, whether mounted, covered, or uncovered; also the peristomes of many Mosses, furnish some very beautiful subjects. The raphides in the cells of Rhubarb, Onion, Hyacinth, &c., furnish most interesting subjects. They are crystals extracted from their roots; they are also found in the stems of the Echinocactus, &c. Algæ, both fresh water and marine, supply a great quantity of interesting subjects, and so do Fungi and Lichens. The thousands of Infusoria (Diatomaceæ and Desmidiaceæ) are of themselves a study for a lifetime, and nearly all are so small that they are undiscernible to the naked eye. They inhabit fresh and salt water, Mr. Pritchard tells us in his book of Infusoria that he had devoted most of his spare time to the study of them for over forty years, and most of them illustrated in his work are magnified three hundred diameters. They are very beautiful objects when highly magnified, and require the care of a specialist when setting up or mounting.

(To be continued.)

## Alocasia Sanderiana nobilis.

Beautiful foliage stove plants are not so frequently brought under notice, and the illustration of the handsome variety named above, which is portrayed on page 173, may bring an old friend to the minds of some, or be entirely new to younger readers. In any case, the plant is a very handsome one.

\* Paper read by Mr. J. Ollerhead at a meeting of the Wimbledon and District Gardeners' Mutual Improvement Society, February 17th, 1902, the subject being again brought forward on March 17th, after a discussion on Roses in pots.

## Roman Hyacinths.

It is a considerable time from now to December, but it is necessary to procure bulbs and pot them for a display of bloom in that month. All gardeners know the value of Roman Hyacinths, and how easily they may be had in bloom during the dark days. Though this is well known, the fact is often overlooked that it is necessary to pot the bulbs early so as to secure plenty of roots before top growth commences. In selecting, choose solid clean bulbs of medium size, as these give the best results. It is advisable to place the bulbs direct in the flowering pots, the best sizes being 5in to 7in pots. The smaller pots will hold four bulbs, the larger six or seven. Drain moderately.

The compost may be of a simple character. Old potting soil to which has been added some leaf soil, sand, and decomposed manure will answer well, or a mixture of fresh loam with the above materials may be preferable. See that it is fairly moist. Fill the pots about three parts full, gently shaking the material down, but not pressing it too firmly.

Arrange the bulbs closely together, and work in some soil between them and over so that the tips are just visible. Then give a watering and allow the surplus to drain away. When the surface is dry place the pots together on a base of ashes, and cover the pots with the same material moist, clean and moderately fine. A sheltered corner or a frame are suitable places. If leaf mould, not too much decomposed, is plentiful this forms an admirable plunging material and may be used. After plunging, the pots may remain undisturbed for at least six weeks. Then examine, and if growth has started from the tips to the extent of an inch, and at the same time the pots are full of roots, bring them out to the light, but do not expose fully for several days or until the blanched tips begin to assume a green hue.

Cool, airy treatment in a frame suits the bulbs. They will make steady and uninterrupted progress, and to have them in bloom in December will need little, if any, forcing. Successional batches to bloom later prove very serviceable, and help to prolong the display of this very useful Hyacinth.

To have bloom at any definite period it may be necessary to have recourse to a little forcing, but do it gradually, for a sudden increase of temperature might prove detrimental. There is little fear, however, with pots full of roots, as the bulbs are naturally ready to advance their flower spikes. Constantly moist condition of the roots and soil is imperative.—E.

## A Young Gardener's Trip to South Africa.

In the early morning of the fourth day after our ship, a Castle liner, had sailed from old England, we came into sight of Madeira, the fine climate of which is so much talked of. In appearance it seemed mountainous from the distance, much resembling the Scottish Highlands. As the steamer swiftly approached and rounded a point the town of Funchal appeared in view. Dotted on the hillside were whitewashed self-contained houses sparkling in the morning sun, and each having a good sized garden attached, and at the foot of the hill is the town itself, similar to a small English coast town. Naturally I was anxious to see if there was anything wonderful in our "line" to be seen on shore, so, with a few friends, we chartered a small boat and made for the pier. Here boys were selling baskets of flowers at 6d. and 1s. each, basket included. The flowers were composed of Callas, Cannas, Lilliums, Pelargoniums, Roses, &c., and Ferns, and would have cost at this time of the year, early June, at home from 5s. to 10s. compared with the small sum they asked.

On entering the Public Garden we were struck with the great amount of blossom therein, compared with the London parks a few days before, but neatness and cleanliness were conspicuous by their absence. The grass, notably, is of very coarse variety, and planted throughout it, at intervals, were specimen tree Begonias, 6ft to 9ft in height, and just a mass of bloom from top to bottom. In large separate beds were Liliun longiflorum, Callas, Cannas, Roses, double Petunias, and Geraniums, flowering more freely than anything I ever saw in our climate. Large plants of Streptosolen Jamesoni and Bougainvillea glabra were blooming profusely in the borders, the flowers being of a richer and darker shade than is usually seen at home; but to see the standard trained trees, over 20ft high, of Wistaria sinensis, with their rich blue tassels in galore, was, indeed, a wonderful sight. Huge plants of the Opuntia, or Prickly Pear, were common, and very curious it looked when we saw it growing as hedges round many of the private house gardens in which Bananas, Vines, Figs, and Sugar Cane

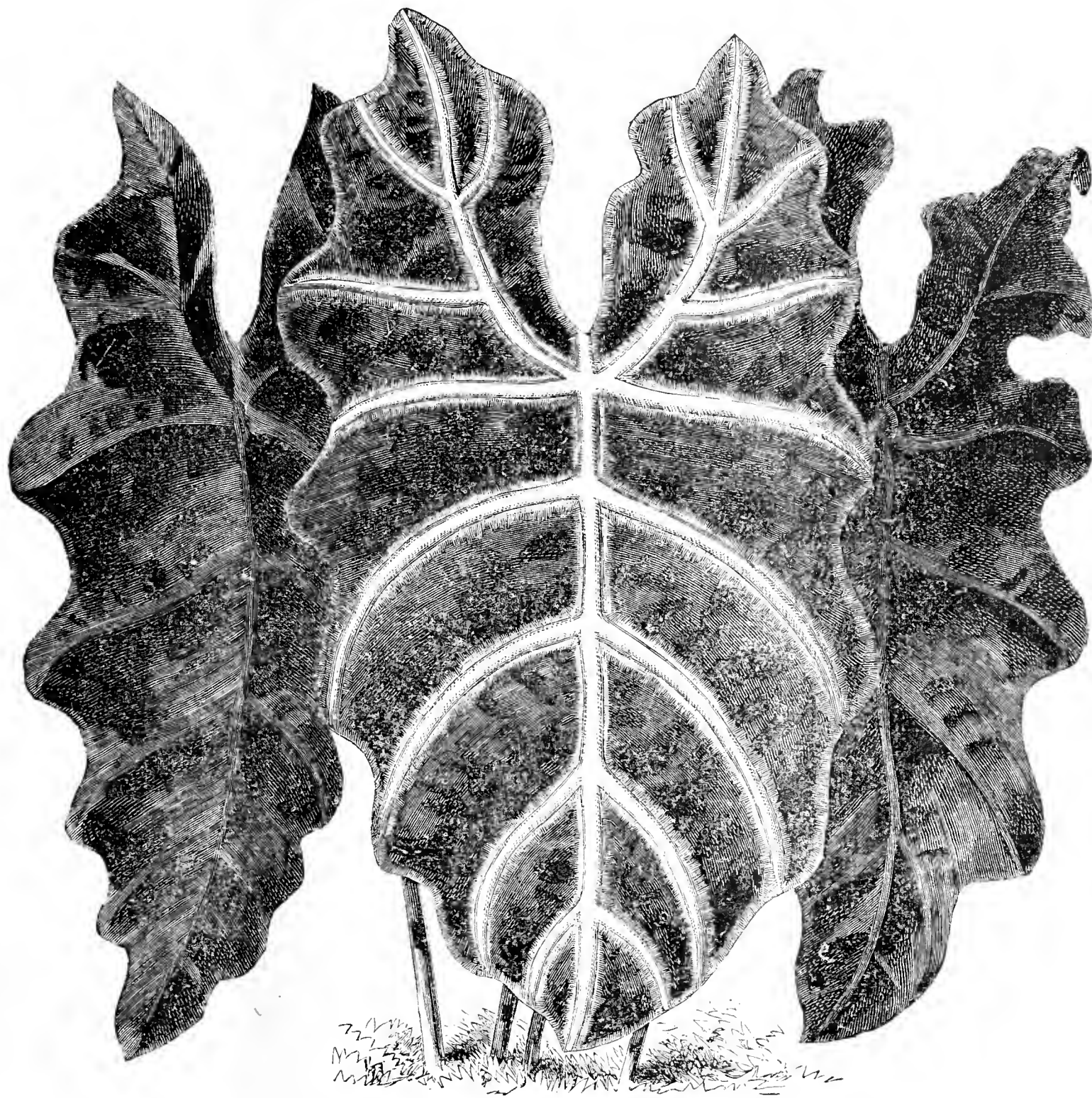
were mostly grown. As shade is a great requirement in this hot climate of Madeira, *Platanus orientalis* is the most commonly planted tree. I say *orientalis*, as the fruit heads on each stalk numbered from four to eight. A hurried visit to the market showed us vegetables of fine quality, and fruit of every description, selling at fairly reasonable rates for the early season. We had now to rejoin our ship, and shortly proceeded on our journey to the Cape.

#### Cape Town.

Thirteen days after we had sailed from the sunny shores of Madeira, Table Mountain was sighted early in the morning, with a good covering of snow for its tablecloth, a rather un-

Phoenix reclinata and Acacias. A fine tree of *Araucaria Bidwilli*, 30ft high, stood out prominently. Throughout the lawn there are beds of Pampas Grass, large specimens of *Agave americana variegata*, *Opuntias*, some 12ft high, and some fine plants of *Doryanthes Palmeri* were seen, and seem to stand the winter well. In different borders, fine plants of *Camellias*, *Datura suaveolens*, *Habrothamnus* and *Geraniums* were blooming freely, and some *Solanums* were quite red with berries; while enormous *Marguerites* were white with flowers. There is also a fine Rose garden, but it appeared that its occupants required to be kept under subjection as some of them were at least 6ft high. Still, some of the Teas were showing good bloom.

In one part of the garden a large triangular bed was being



*Alocasia Sanderiana nobilis.* (See page 172.)

usual occurrence for that part of the world, as we found out from some of the townspeople. I wish some of the snow had fallen when we were crossing the Equator, as the heat there was almost suffocating. Talk of Pine stoves! you should have a touch of the Equator heat in them and you could talk then. Unfortunately, it was cold and wet when we reached Cape Town, but after we had passed the ordeal of having our permits examined, we made tracks for the town. Before reaching the dock gates we had a full mile of mud, 4in deep to wade through. Unfortunately, too, it was winter, else we might have seen the renowned Government Avenue at its best. It is a fine broad walk, bounded on either side by sturdy Oaks. Close by, the Municipal Gardens are situated. Here we found plants which we would have been proud of at home, at 6ft or 8ft high, grown into trees 20ft to 30ft high; for instance, *Grevillea robusta*,

planted out with Scabious, and very singularly, the gardeners had started at the edges and planted towards the centre, where they seemed to be in a fix to make a decent finish. The glass houses, which were in first-class order, comprised a fernery, stove, and a mixed house of Palms, Tree Ferns, and Orchids, mostly *Cypripediums*, *Adiantums*, of good variety, and *Nephrolepis* were the most common; and in the stove, much the same class of stuff was grown as at home. A visit to Cape Town is hardly complete without a run out to Wynberg, the home of the Silver Tree, *Leucadendron argenteum*. To see the silvery leaves glistening in the sun is a beautiful sight indeed. In some shops in the town these leaves, after being partly handpainted and a suitable inscription printed thereon, they are then sold from 1s. to 2s. 6d. each, as mementoes of South Africa.—ALPHA.

(To be continued.)



## Some "Cottage" Tulips.

While the "English" Tulips will always command the admiration of the fancier, and will be cultivated by a select, if limited, coterie of connoisseurs, the less formal, and, it may be, less refined, flowers of the other sections will have a wider circle of admirers. This is not to be wondered at when we see these fine self-coloured or boldly marked flowers in the garden, or when cut and standing in bowls and vases about the house. Among these there are few so fine and so effective as the class known as the "Cottage" Tulips, flowers which have been mainly preserved through being grown in cottage and other old gardens at a time when the later Tulips of their kind had sunk into unmerited neglect. Now, however, they have again emerged from obscurity, and their number is being added to in various ways, so that there is choice enough and to spare of the most glowing or of the softest colours imaginable. As this is written I am looking into the garden upon some of these old flowers, and in an old lustreware jug and in other receptacles in the room are some of the choicest of these flowers, sent to me from the sunny Emerald Isle, which are finer than can be grown in the mixed border as permanent occupants, though it is possible to do them well even there, as I have proved for years.

While they are yet fresh and bright, let us take a look at these flowers. There is the shapely Bouton d'Or, of a bright golden yellow, and approaching more nearly the standard of the florist than the greater number of the class. Of a lighter shade, of greater size, and less formal in its outline, is the glorious fulgens lutea; while lighter yellow still is lutea pallida, though of like form and size. Still paler and more Primrose-like in its hue is the exquisite Leghorn Bonnet, and paler yet is the soft creamy vitellina, one of my favourites in the garden. Not quite so "black as Erebus," but of a chocolate black (to coin a term), is Nigrette, a large and handsome flower, reminding one of another called Eugène Delacroix, from another source.

With John Ruskin we are introduced to another lovely section, less effective in the distance, it may be, but of exquisite beauty. Beginning with orange yellow, shaded pink at the edge of the petals, it changes much as the flowers age, but with its combinations and changes is so difficult to do justice to that one had better say little more. Little less difficult is it to describe the charming Fairy Queen, which begins by being a kind of heliotrope and yellow, and dies off an exquisite fawn. This leads us to The Fawn, which is one of the prettiest of its class, with beautiful dove-like shades and tonings. Here, too, are the flaming flowers of Spathulata aurantiaca maculata, whose glowing orange-scarlet flowers are decorated with a deep black spot at the base of each petal. A pretty little flower, too, is Marjoleta, which is a pretty yellow, with a blotch of bright crimson at the edge of each petal. Then there is the beautiful canary-coloured ixioides, with its pretty flowers decorated with their black bases.

The forms of T. Billietiana are numerous, and all are beautiful, none being hardier or more acceptable than Golden Crown, which sometimes passes for the pure yellow Golden Eagle, and which has its pretty, pointed, yellow flowers at first narrowly edged with a scarlet line, which gradually spreads until the flowers are suffused with orange-scarlet. There is also a bunch of the pretty Goldflake, with orange-scarlet, gold-flaked flowers. A handsome flower, also, is Gala Beauty, or Columbus, with its vermilion and golden yellow blotched blooms; while for those who prefer such parti-coloured flowers, the white and cherry-crimson flaked La Panachée will prove welcome when May comes around once more. The plum-coloured Chameleon, blotched maroon, and shaded to light yellow, is handsome as well, while one might almost complete the gamut of floral colours by telling of the many more which, with white, scarlet, yellow, purple, and almost black, show us how glorious are these flowers of the early summer. Thus one might tell of the beautiful York and Lancaster, which you see one day white and pink, and a few days after has assumed tints one would consider incredible on the flower at first; or the beautiful Royal White, or the delicately-edged Picotee, or the chaste Didieri alba. All have charms, and none have ugliness. All help to give us delight, and all tend towards making the garden what a garden ought to be, a place giving cheering refreshment to the heart.—S. ARNOTT.



### Gathering Tomatoes.

"East Kent" says (page 164), "Gather the forwardest before they become fully ripe, and finish on a warm shelf." Excellent advice, if the reader wishes to sell them; but if he intends to eat them, let him leave them to thoroughly finish on the plant, and consume them the same day they are gathered. It is not unlikely that he will then say he did not know what the flavour of a Tomato was before.—W. R. RAILLEM.

### The Golden Poppy.

The writer of the interesting paper on "Cheddar Pinks" in last week's issue (page 144) asked about the Golden Poppy. It belongs to the Poppy tribe; but its name is Meconopsis cambrica (Welsh Poppy). It is a singularly pretty flower, and grows easily from seed. I have found it at the English Lakes, at Cheddar, and other places in Somerset. It is the only British species, and does well in gardens, sowing its seed around it.—J. L. WOODWARD.

### Rosa Wichuriana.

It was intensely interesting to follow the writer through "Roseland" (page 448) in his graphic glorification of this Rose and its progeny; but what about "that little green caterpillar" and the "slug shot," that "faithful friend and infallible remedy"? We have some bare, ugly banks crying out for beautification, and gladly seize on the good advice re Rosa Wichuriana, but if that "little green caterpillar" appears (and where won't he appear?) we don't want to be "humbugging around with other things;" hence, oh! writer in "Roseland," what is "slug shot"? Is it the name of some caterpillaricide, or is it the slug shot pure and simple? If the latter, how is it applied? Can one twang away with a catapult at the caterpillars, or just fill a gun and blaze away at 'em?—QUIZ.

The following we take from "The Florist's Exchange.—"There is a compound called 'slug shot' that is very extensively sold because of its cheapness. An analysis of this substance shows that it is composed almost exclusively of crude gypsum, with a small amount of arsenious acid and copper oxide added, probably in the form of Paris green. The amounts of these two substances in a sample recently examined were only 1.58 per cent. arsenious oxide and 0.58 per cent. copper oxide. It is needless to say that an article containing as little arsenious oxide and copper as the above will do little or no good as an insecticide. An analysis of another sample of this substance showed that very small amounts of sulphur, tobacco and carbolic acid were present, thus increasing the value of the preparation."—Ed.]

### Hedge Sparrow or House Sparrow?

In a recent issue appeared a paragraph relating to the depredations of the sparrows among the Corn crops; but the writer made a slip by confusing the hedge sparrow with the common sparrow. The hedge sparrow is one of our best friends, and is far too rare in the locality from which I write (Tewkesbury); but the common sparrow is an intolerable plague. He clears off our young Lettuces by the thousand in the spring, and if we do not protect them with wire guards he does the same with the Peas, even when they are 6in high. I found it quite impossible last spring to grow early Lettuces. It is true they were not much wanted, because the autumn-sown ones held out till very late in the season. But in some years, after a severe winter, or a hot dry spring, I have known Early Paris Market to be worth 1s. 6d. a dozen in about seven weeks after sowing, and in such a case the attentions of the sparrow would be far from welcome. I live on the outskirts of a town, and therefore am not able to judge, but I have an idea that many of our best friends of the feathered world are becoming scarcer. It would be interesting to know whether this is so in rural districts. What about the hedge sparrow above mentioned, with the tiny bill and the sweet song? the linnets, wrens, goldfinches, wag-tails, redstarts, and a host of others which I now seldom see? and I wonder how far the cheeky sparrow is responsible for ousting his more useful and more modest brethren. People with kindly hearts feed the birds and I do not complain of their doing so, but I am afraid where they feed one friend they feed

twenty fees. I am quite aware that the sparrows feed their young largely on insects but not exclusively, as some writers would have us believe, for I have seen them fed with Lettuces which I wanted for another purpose, and when the birds grow up they do not trouble much about insects till such time as they have a family to rear. Did they confine their attention to a limited number of plants which are large and crisp, I would not complain, but they prefer small plants just beginning to grow, and it takes a goodly number of these to satisfy the voracious creatures. Besides, if as I more than suspect, they are denuding the country of birds which are exclusively insect feeders, it is clear they do more harm than good, and that was the opinion of our dear old friend the late Miss Ormerod, who was no mean judge.—WM. TAYLOR.

### The Cheddar Pink and Other Plants.

Those who possess what is now termed a wall garden, are usually able to look upon the little Cheddar Pink as one of its prettiest adornments. Such will be more interested in it after reading Mr. H. R. Richards' description of the wild rocky home of *Dianthus cæsius*. A plant may be beautiful; it becomes doubly so when its surroundings are likewise. And although the flowers of the Cheddar Pink are frail when seen against the full, round garden Pink, the silvery, compact foliage would render it worthy of a place were it altogether blossomless. That place should be by preference, an old wall or rockery, for on flat borders the plant is inclined to rot off in wet winters. Those who regret to see the ever increasing list of extinct, or nearly extinct British plants, would only be glad if all the rarer native plants had such a strong fortification to retire upon as is the case with this Pink. Plants that inhabit the rocky cliffs and mountains of an island are well protected against extermination, while some that grace the grassy lowlands with quaint beauty, as in several of our Orchids, are too easily rooted out. In Edinburgh we have a rare native plant that is found in much the same positions as is the Cheddar Pink. This is the Viscid Catchfly (*Lychnis Viscaria*) whose improved double forms are among the best bright flowers of summertime. Even in its wild condition it is a pretty plant, although often starved and stunted in hot, dry seasons. In the good soil of a garden, its flowers increase in size and its appearance improves. This pink Catchfly grows plentifully enough at Blackford Hill, near Edinburgh, but nearer the city, on Samson's Ribs, a precipitous cliff of Arthur's Seat, it is not so easily gathered. In some years one may find it low enough down, while in others a climb up the crumbling basaltic pillars is needful to procure the plant. This is dangerous to ribs other than "Samson's!" Another plant mentioned by Mr. Richards in addition to the *Dianthus*, is the elegant yellow Welsh Poppy (*Meeonopsis cambrica*). It is a perennial that likes to be squeezed by the roots, so that a wall or cliff affords it a happy home. In Edinburgh (it is not wild here) the Welsh Poppy flowers earlier than the native kinds. Its season in the rock garden is over now, and seeds are ripe. The double flowered form, a plant decidedly worth possessing, has flowered throughout the summer, and it has yet a blossom or two, compact and longer lasting than the ordinary one.—D. S. FISH.

### "Out of a Place."

DEAR "OLD BOY,"

I am one of a number who think they have a distinct grievance, and, that, too, against none other than your own respected self. I can imagine that many of your admirers will at once be in readiness to take up their cudgels on your behalf; but if I say we complain more in love than anger, I hope they will not be quite relentless with me for being spokesman. Our grievance is this: You have at various times addressed articles of encouragement and advice to the budding gardener, the enthusiastic journeyman, the aspiring foreman, and the young head gardener, all of which we know have been appreciated, taken to heart by many; but never a word have you written to the fellow who is "out," and whose luck is, or seems to be, "dead out" as well, and there are many of us in that predicament just now.

We feel, too, as if we had been unintentionally misled by your kind and well-meant advice, and, through it, have been following a wrong course, which has to an appreciable degree brought about our present misfortune. The latter we attribute as well to every cause imaginable, excepting, of course, ourselves, and what Englishman would do that?

Some of us trace our bad luck from the advent of the new century, but as we have a long way to go to the next, we cannot reasonably hope that when it comes, should it bring a better vein of fortune, it would very materially affect us. Some—disloyal members of an honourable profession—say the Coronation Year has brought bad luck to everybody, His Majesty himself not excepted, and that the "screw" is being applied in every direction, but in no place more so than in the garden, and to that reason their presence among the unfortunates is attributed. Others—these a very large number—ungallantly

avow that the fact of their being out is directly due—I use their own phrasing—"to the unreasonableness, general cussedness, and petty tyrannies of swivel-minded lady employers." As if any lady could be awkward, or unreasonable, or would be if she could! They say, too, that it is perfectly useless to attempt to reason with, or expect justice from, a prejudiced woman. On the latter I am not prepared to express an opinion, but I can see wisdom in not pursuing the former course of action. Some of these degenerates even affirm their intention of having nothing to do with a "shop" where the "missus" is "boss," but I pointed out that the comparative rarity of bachelor-governed gardening establishments would render them liable to be out a very long time.

Another division (those I am in direct sympathy with) say, that on making application for any vacant post, they at once meet with the rebuff, that no foreman will be treated with, although the candidates may have spent fifteen or twenty years in first-class gardens. One employer even went so far as to say that he wanted a man with at least ten years' experience as head, but when an applicant turned up with the necessary experience, he was immediately told that he was too old!

The chief reason, however, for the iron having entered so deeply into our soul, is the fact that our one-time bothy comrade is now head gardener to Lord —, at a salary of £120 a year, with the usual perquisites, scorning the advice you gave us in those articles we read with so much pleasure a few years ago, spent his evenings on the cricket ground, and acquired the secret of "off" and "leg-breaks," "leg theory," &c., and is now captain of the club which his lordship so munificently maintains, and presides at the luncheons so generously provided for the home fixtures; while we, who in the solitude of the bothy struggled with the mysteries of right angles, equilateral, isosceles triangles, in circumstances very much "off," are perilously near being "stumped," with scarcely a leg to stand on, are confronted by an "asses' bridge," which no study of the elements of geometry will help us to negotiate; and as the weeks roll on into months, months into years, our depleted exchequer becomes less able to bear the strain imposed on it, we seem likely, eventually, to be included in a very large "natural order," which was not within the range of our studies for that precious South Kensington certificate, the common or garden name of which is, I believe, Ne'er do wells.

This condition of things is to us, to say the least, extremely disappointing, although Lord So-and-So's gardener says he has but little fault to find with it, and that if either of us had been in his place, well—he would not have been there, which seems logical. He added, too, that he could not see that it was bad luck which put him in his present position instead of me, with which view I could not agree; and then we dropped into an unprofitable discussion as to what constituted good or bad luck, but could agree on no point except that it was bad luck there were not good situations for us all. He told us that it was his fine batting while living at N—, as foreman, which brought him into notice, and which enabled him to obtain the influence necessary to secure such a good post as that of head gardener to Lord —, when it suddenly dawned on us what idiots we were in thinking that it was ability, application, and experience that were the chief factors necessary towards obtaining an appointment. Influence we had never reckoned with at all. "H." informed us as well that even the parson at N— very kindly interested himself in the matter, and wrote Lord —, saying what a capital fellow he ("H.") was, and how useful he had found him at the village bun struggles, and such-like institutions, and how delighted he should be to hear that Lord — had appointed him to the vacancy.

We heard the other day that "H." had written down to C— and Co. for a man to come up and pot his Orchids, as he had not a man capable of doing it, which seemed to us admission that he could not do it himself. An old companion, now in adversity, whom we will name "Jack," whose Cattleyas at the Temple, and Grapes at the Palace, when he was foreman at G— Hill, you will remember, and who has been walking the streets of late, was sent down to do the potting. "H." actually admitted to "Jack" his total ignorance of Orchids and their requirements, and "Jack," in that suave manner of his, said the admission was perfectly unnecessary. He always had a nice way of saying unpleasant things. I expect "Jack" will go on with his street walking when he has finished, unless he should be so fortunate as to be able to secure a berth, but, as he says, "How the plie'man (he didn't say "plie'man") he is to get a second head place without having a first, he cannot very well see," and under present conditions the latter is an impossibility; but, like the philosopher that he is, concludes that he ought to be big enough (he is not exactly an infant) to squeeze in somewhere. It seems to us we have made a mistake in not following up the cricket and the bun struggles, but we are not quite sure on the point. Any advice and a little encouragement will, I know, be appreciated by those who NEVER DESPAIR.

P.S.—We get down to Kew whenever we can, and as soon as the evening classes commence shall probably have another turn at those triangles.



## Shrewsbury Floral Fête.

August 20th and 21st.

The show yard again! The show yard? Ah, well, no, that smacks too much of the agriculturist's competitions, where well-groomed shorthorns, pedigreed stallions, and fat swine are the objects of all the stir. Horticultural exhibition grounds are equally as bustling as agricultural show yards, and the subjects of competition incite quite as much of interest and admiration.

Such a show as that held this week at Shrewsbury is of great educational value to those many gardeners whose outings are all too rare, and who have few chances of seeing the products of other gardens outside their own county. Such practitioners are doubtless apt to fix a wrong standard of excellence in their minds which a visit to such a show as we now report, if only made once in a while, is pretty sure to correct.

The exhibition this year maintains the record of success, and so many as 200 more entries than last year were received on this occasion. The general impression gained in a cursory look round before judging commenced was that lack of sunshine and long-continued cold weather over these islands seems to count for little against the strength of purpose and ability of the British gardener. Muscat Grapes were many times staged rather green, and there may have been less profusion of blossom on some of the specimen flowering plants, Dahlias and early Chrysanthemums, too, being backward, and Roses few; but on the whole the show was admirable, and highly creditable in all departments.

New features cannot very well be expected, but some of the trade firms display a commendable spirit in their efforts at novelty, and in introducing "something new." The executive of the Shropshire Horticultural Society, too, are certainly not apathetic. This year they have lighted the largest marquee with electric lamps, so that the workers could continue with the best possible convenience all the night long, if they had a mind to. Another point worthy of notice, though not novel here, is the facility for competitors to find the exact spot whereon to stage their various entries. At the edges of the tables in all the tents are printed cards bearing the numbers and description of the class, these cards being neatly tacked down, and one is provided for every entry that has been booked. Could anything better be devised? There is absolutely no chance for confusion or mistakes.

The eve of the show was calm and pleasant, with full moonshine, and the Wednesday morning opened in bright sunshine, and with a brisk breeze. Prognostications for rain were made by some, but for the sake of those who so much deserve success it was hoped the weather would hold fine.

The London complement of competitors, visitors, judges, and journalists must have felt satisfaction in noting the freshness of the country throughout the route. Corn crops are heavy, and harvest in all the counties southward is general. Potatoes are being lifted, and even some of the cornfields are again being ploughed.

### Plants and Groups.

This section was, as usual, represented in great force, nearly all the champion plant growers taking a part. The huge specimen plants and groups filled two enormous marquees. The colouring of the Crotons was truly remarkable after such a dull season, and the majority of the flowering plants were in the pink of condition. They were, without doubt, a triumph to the gardener's art.

The class for twenty stove and greenhouse plants is always a strong one here, but on this occasion there were no less than four entries, a gigantic show in one class, the prizes, £25, £20, and £15, being enough to attract exhibitors from all parts. Mr. B. Cromwell, gardener, to T. Sutton Timmis, Esq., Allerton, Liverpool, secured the blue ribbon, with three gigantic Kentias, Crotons Queen Victoria, Aurea, and Marantas, Countess Montefontaineensis, and Williamsoni. These were quite remarkable for their huge size and perfect colouring. The flowering section was well represented by Ixoras Williamsi (two plants), Coccinea superba (two plants), Duffi, and Pilgrimi, Rhododendron Taylori, superb plants of Lapagerias alba and rosea, Allamanda Hendersoni, Statice profusa, and Stephanotis floribunda, in good condition.

Messrs. J. Cypher and Son, Cheltenham, were a capital second, the best plants being Statice intermedia, a grand plant. Bougainvilleas Cypheri and Sanderiana were in excellent condition. Crotons Queen Victoria and Sunset made a splendid display. The Allamandas were also good. There could not have been very much between these exhibitors, while Mr. W. Vause, Leamington, was third, with large plants, which, however, were considerably behind the others in development and finish.

For a group of miscellaneous plants, foliage and flowering, arranged for effect, in a space of three hundred square feet, with prizes equal to those in the first class, four competitors faced the judges, all of them making a fine display. Messrs. J. Cypher and Son were placed first, the arrangement being artistic, and the

material employed of the best. The chief foliage plants were Cocos Weddelliana, Bamboos, Aralias, Crotons, Asparagus, Dracenas, and Ferns. The "dot" plants were very striking. The flowering plants were chiefly Orchids, Begonias, Ixoras, and Lantanas. The whole groups were quite fairylike, and quite up to the Shrewsbury standard.

The second position was taken by Mr. J. V. McDonald, gardener to G. H. Kenrick, Esq., Edgbaston, and it was in every way worthy to do so. The plan followed was well carried out, the whole of the ground being covered without undue crowding. The Orchids, Crotons, Lilioms, Humeas, and Palms were the chief features. Mr. W. Finch, Coventry, was third, with a different design, made of arches and mounds. The white Lilioms, with a quantity of silvery foliage, were most conspicuous, and gave quite a separate character to the group.

Class 3 was for a group of plants, foliage only, of the same size, and the same prize money as in the previous class. This attracted three competitors. Messrs. J. Cypher and Son were, however, easy winners, the Palms and Crotons being remarkably well coloured, while the arrangement left little to be desired, the groundwork being especially good. Mr. J. Thompson, gardener to G. H. Turner, Esq., Derby, was second, with a distinct arrangement of choice stove plants, the Crotons and Alocasias being noteworthy; while third honours went to Mr. J. V. McDonald for a pretty arrangement of plants, the copper shading being quite a feature throughout the group.

Class 4 was for thirty stove or greenhouse plants, not to exceed ten inches. Orchids excluded. These made a brave show, Mr. T. Lambert leading well with some remarkably fine plants for the pots. The most noteworthy were Clerodendron fallax, Ixora Pilgrimi, Bougainvillea glabra, Dipladenia amabilis, Allamanda Hendersoni, and a few Crotons, beautifully coloured. Mr. B. Cromwell was second, with good specimens of Crassula coccinea, Ixora Duffi, Alocasia Sanderiana, and Lapageria rosea superba; while Messrs. J. Cypher and Sons occupied third place.

The single specimen flowering plant only brought out three plants, Mr. W. Vause being placed first with a good plant of Erica æmula, which lacked freshness. Messrs. J. Cypher and Son followed with a well flowered plant of Statice intermedia; while Mr. W. Finch brought up the rear with the same variety. This was a weaker class than one would expect here.

In the class for four Ferns there were five competitors. Here Mr. B. Cromwell won first place easily with good specimens of Microlepia hirta cristata, Nephrolepis rufescens, a grand plant, Nephrolepis davallioides furcans, and Adiantum euneatum. Mr. J. Stevenson, gardener to Mrs. J. H. Slaney, Wellington, was second, and Mr. J. Carter third.

For six Dracenas there were only two competitors, the first prize going to Mr. T. Lambert for large well-coloured plants. Mr. R. Lawley was second with good coloured plants but smaller.

Coleuses were rather sparsely represented, only two exhibits being staged, the first prize going to Mr. H. Worrell for four moderate specimens; Mr. T. Stevenson being second with smaller plants.

The beauty of the Caladiums was destroyed by being staged on a table without covering. Mr. B. Cromwell led off with six well coloured and developed plants. Mr. S. Bremmell followed with rather soft plants, and Mr. W. Ashwood, gardener to R. A. Newill, Esq., Admaston, was third.

Class 10 represented four Fuchsias, for which there were three entries, Mr. J. Jenks, Castle Fields, being first with six moderate plants. Mr. A. Bateman was second with a good fresh exhibit, but rather smaller; while Mr. J. Farrant made a good third.

Mr. H. Clift, gardener to R. Taylor, Esq., was the only exhibitor of six single Zonals, and was awarded second prize; rather hard luck. For six double Zonal Pelargoniums there were three entries, and Mr. H. Clift was placed first with nice fresh plants. Mr. W. Payne, gardener to E. S. Godsell, Esq., Stroud, followed, and Mr. Jas. Farrant, brought up the rear.

Class 14 was for six Begonias, and there were three entries, but Messrs. B. R. Davis and Sons, Yeovil, were handsomely first with six splendid plants, the scarlet W. Sparshot being excellent. Mr. H. Clift followed with larger plants, and Mr. J. Farrant came third.

Gloxinias were represented by five entries, the first prize going to Mr. J. Carter, gardener to W. J. Scott, Esq., Berford House, for a splendid exhibit; Mr. Chas. Yeoman, gardener to A. Darby, Esq., Baschurch, made a good second; and Mr. Jas. Farrant third.

Table plants were good throughout, Mr. B. Cromwell winning with capital Crotons and Palms. Mr. A. H. Hall, gardener to J. C. Waterhouse, Esq., Prestbury, Macclesfield, followed, and Mr. F. Jordan, gardener to T. Corbett, Esq., Impney Hall, Droitwich, was third.

Class 17, for a collection of thirty plants in 5in pots, not less than twenty in bloom, made a good show. The first prize was awarded Mr. T. Lambert, gardener to Lord Harlech, Brogyntyn, for a good collection; the best were Ixora Prince of Orange, Begonia Gloire de Lorraine, Acalypha Sanderiana, Alocasias,

and Clerodendrons. Mr. B. Cromwell was a somewhat weaker second, while Mr. J. Carter made a neat exhibit for third place.

#### THE FOLLOWING CLASSES ARE CONFINED TO THE COUNTY OF SALOP.

The group of plants arranged for effect to occupy 150ft. Orchids excluded, confined to the county of Salop. Here there were three entries; Mr. C. Roberts, gardener to Mrs. Swann, Halston Hall, Oswestry, proved the victor, for a well-arranged group, the mounds being well covered with choice plants, while the dot plants were well selected and most effective. Mr. S. Bremmell, gardener to H. N. Hayhurst, Esq., Wellington, came second with a pretty group, but rather lacking in finish; and Mr. W. Phillips, gardener to T. F. Kynnersley, Esq., Leighton Hall, was third with a rather heavier arrangement. The winner in this class secured a Coronation Cup value five guineas, presented by the President.

Class 19 was for six stove and greenhouse plants. Here the entries numbered two, Mr. T. Lambert winning first prize with good plants of *Areca Vershaeffelti*, *Croton Warreni*, *Allamanda Williamsi*, a fine plant of *Eucharis amazonica*, *Vinca rosea*, and *Ixora javanica floribunda*. Mr. W. Phillips followed, having a good specimen *Hydrangea*.

The following class for a similar number of plants, not less than three in flower, exhibitors in the previous class barred. Here Mr. J. Carter was deservedly awarded the first prize with good plants of *Stephanotis* and *Bougainvillea*. Mr. Jas. Farrant was second, and Mr. A. Jones third.

Class 21 was for three *Fuchsias*, and four competitors staged, Mr. H. Worrall being placed first, Mr. A. Bateman following with fresh small plants, and Mr. J. Jenks third.

*Begonias*, four plants, found three exhibitors, Mr. J. Carter being awarded first prize for good plants, which were fresh and bright. Mr. N. Clift was second, and Mr. J. Farrant third.

For three double *Geraniums* there were just three competitors, and Mr. J. Carter proved the victor with three well-flowered plants, followed by Mr. J. Jenks, while Mr. H. Worrall was third.

There were a similar number of contestants for three single flowering plants. Mr. J. Carter repeated his success, and carried off leading honours, followed by Messrs. J. Jenks and H. Worrall in the order named.

#### Cut Flowers.

The tents devoted to the cut flowers and floral arrangements were filled to overflowing, and were quite up to the usual standard seen here. It was difficult to report them satisfactorily owing to the dense pack of visitors, who evinced great interest in these classes.

The class for a display of floral arrangements in a space of 12ft by 5ft was rendered additionally attractive by a silver cup presented by the Shropshire Society in London, and a fine display was made in the class. Messrs. Jones and Sons, Shrewsbury, proved the winners with a grand floral display, consisting of harps, baskets, bouquets, and a large variety of other designs. Mention should be made of an erect cross of crimson *Asters*, with a few *Liliums*. The firm are to be congratulated on their success.

For a bridal and ball bouquet there was a keen competition. Mr. W. Hayward, Kingston-on-Thames, was placed first for a pair of beautiful bouquets, composed chiefly of Orchids; Messrs. Jones and Sons were second with a similar pair, and Mr. J. Derbyshire third. In the class for similar work with Orchids excluded there were three entries, Mr. W. Treseder, Cardiff, being a good first. Messrs. Jones and Sons were second, and the third prize was withheld.

The Cactus Dahlia does not appear to be popular for bouquet work, for there was only one entry for a bouquet of Cactus Dahlias. This came from Mr. W. Treseder, and was deservedly awarded the first prize. The *Roses*, however, did not do much better, for there were only two, Mr. W. Treseder again leading with a pretty arrangement, and Mr. J. Derbyshire was second.

Messrs. Jones and Sons were first for a featherweight bouquet, which was composed chiefly of Orchids, followed by Mr. J. Derbyshire with a weaker arrangement.

The competition for a floral basket was keenly contested, Messrs. Jones and Sons being first with a delightful basket, followed by Mr. W. Treseder and Miss K. Coster in the order named.

Class 32 was for a stand of cut flowers, and there were five entries, Messrs. Jones and Sons leading with a pretty arrangement of scarlet *Carnations*. Miss K. Coster followed with pink *Williams* and Co. were second, and Mrs. Jones, Bicton, third.

The class for a bamboo flower stand of Cactus Dahlias brought out a good entry. Mr. W. Treseder was, however, a good first with an arrangement of mixed colours. Messrs. Keynes, Williams and Co. were second, and Mrs. Jones, Bicton, third.

Messrs. Jones and Sons were the only exhibitors of button-holes and sprays, and were awarded first prize, which they richly deserved.

The class for a collection of hardy perennials arranged in

a space of 15ft by 5ft, with prizes of £10 for first and the others in proportion, made a really fine display. Messrs. Harkness and Son, Leeming Barr, were placed first with a grand collection well arranged. Messrs. I. Hense and Son, Westbury-on-Trym, were second with a pretty display, and Messrs. G. Gibson and Co., Bedale, third. It was quite impossible to get near this class to report the different subjects employed.

In Class 37, for a collection of hardy perennials (*Roses* excluded), arranged in a space 15ft by 5ft, and all distinct, Messrs. Harkness, of Bedale, beat House and Son, of Bristol, and third Messrs. Gibson and Co. Though very fine, still, where £10 is offered for first prize, the exhibits ought certainly to be richer, larger, and more choice and handsome. The Shrewsbury groups do not equal those shown as a rule at the Edinburgh Show in September.

*Dahlias* were scarcely advanced enough to appear with any effect, yet the groups of Cactus varieties in a space 10ft by 5ft, were interesting thus early in the season. In class 38, space as here stated, Messrs. Keynes, Williams and Co., Salisbury, were placed foremost; Jones and Sons, Shrewsbury, second; and third, Messrs. Rowe and Son, of Worcester. For a general collection of all sorts of Dahlias, the awards were given in the following order: 1, Mr. Treseder, of Cardiff; 2, Keynes, Williams, and Co., and 3, Jones and Sons. *Carnations* were splendidly shown, but we unfortunately overlooked the names of the prizewinners.

In Class 41, for two dozen bunches of hardy flowers, the leading prize was accorded to Miss Humberton, Newton Hall, Chester, beating Isaac House and Son, and Gibson and Co., of Bedale, who followed so. Competition was keen here, and also in the next class for one dozen bunches of the same where nurserymen were excluded. Miss Humberton again led, and in second place came the Bishop of Shrewsbury; third, Mr. F. Briskell, of Nuneaton.

For thirty-six *Gladioli*, in Class 43, Messrs. Harkness had the premier award easily.

Here we should like to enter a protest against the unnecessary pasting of the prize-slips over the class numbers on the entry cards, making it still more difficult for Press men to fulfil their duties and report correctly.

*Roses* were but a small contribution, the prizes for twenty-four blooms going respectively to Messrs. Harkness, D. and W. Croll, and the King's Acre Nurseries, Limited. The classes were poor.

In Class 50, for twenty-four blooms of Show and Fancy Dahlias the renowned M. Campbell, from High Blantyre, N.B., took premier honours, but Mr. S. Mortimer's second prize lot were exceedingly close in points, to say the least. Mr. Treseder, from Cardiff, was third. For twelve of the same, trade excluded, the awards went to: 1, Mr. S. Cooper, of Chippenham; and 2, Mr. T. Jones, Ruabon. For twenty-four Cactus Dahlias, not more than two of a sort, Mr. Mortimer won nicely with beautiful blooms, containing the following list:—Mrs. E. Mawley, new seedling Brightness, Vesta, Mrs. Winstanley, Mrs. Carter Page, Viscountess Sherbrook, new seedling Mabel, Uncle Tom, Gabriel, Lyric, Mrs. A. F. Perkins, Monarch, Mayor Tuppenny, Jealousy, Mrs. J. J. Crowe, Sport, Starfish, and Mrs. Mortimer. Messrs. Vernon and Barnard, of Nantwich, came second. For a like amount where the trade was excluded, Mr. E. King King, of Leominster, led, and also for six vases of Cactus sorts, three of each.

Attractive prizes for Sweet Peas, in Class 65 (twelve distinct kinds arranged in vases), brought out a considerable number of good collections. Mr. R. Bolton, of Carnforth, was first, and Messrs. House and Son second.

#### Fruit.

This section draws perhaps greater notice than any other at Shrewsbury, and when the handsome money prizes for collections of fruits and for Grapes are considered, knowing also that the champions from far and near annually bring the products of their skill, it is not to be wondered at that the fruit leads even against plants and flowers.

There were five decorated dessert tables this year for the prizes of £15, £12, £8, and £5, respectively. Judging, as is well known, is done by points, and the highest number on this occasion was gained by that hero of many competitions, Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, whose collection included Muscat Hamburgh, and Muscat of Alexandria Grapes, the former well coloured, the latter only moderately; Pears Triomphe de Vienne were perfect; Transparent Gage, Elruge Nectarines, Royal George Peaches, Ribston Pippin Apples, Royal Favourite (green flesh), and Taunton Hero Melons, with a handsome dish of Figs, completed the display. The varieties on the off-side of the table we were unable to see, the wire netting having been run round after judging was finished. The points awarded were as follows, and we give the possible numbers in brackets first. Thus for Apples (7), 6; Figs (7), 6; Grapes, two, black (10), 7; (10), 9; Grapes, two, white; 7 in both cases out of 10; Melons, two (8), 7; and again 6. Peaches, twice 6 out of 8; Pears, two, 6½ and 6 out of two sevens; Plums (6), 5½; and for beauty of flower and foliage 7 out

(Continued on page 180.)



## Bucklebury Place, Woolhampton.

The day on which I visited the Berkshire residence of Arthur W. Sutton, Esq., proved to be one of the warmest and most congenial in that long series of dripping days with piercing winds that formed the spring and early summer of the current year. The "Place" itself lies high and dry on the foreslopes of Bucklebury Common, eyeing in wide perspective the whole southern flange of rural Berkshire, and unsurpassed in the magnificence of its own surroundings. The month was May, and by the wayside one plucked the crimson leaves and rose-pink flowers of Herb Robert, and nowhere does the greater Starwort—the *Stellaria Holostea*—luxuriate more vigorously



Bucklebury Place, Woolhampton, Berks.

than on the banks and by the hedgerows of this Woolhampton district.

Bucklebury Place lies westward from Reading, at a distance of some fourteen miles. Since it was purchased by the present owner the gardens have been entirely designed and made, and even the picturesque residence in Swiss style of architecture, and half-timbered construction, has been completed during his tenure. It commands an unrivalled view of the surrounding hills and dales, while sun and wind can never miss it. The illustration presents a glance of the house from the north side on which is the main entrance door and carriage way. The lawns are diversified by groups of shrubs, among which the handsome *Rhododendrons* are deserved when still a long way off. The brilliance of the *Rhododendrons* in the higher plane was equalled by the charming beds and borders of *Wallflowers* below them, and of which there were a full selection of the Reading firm's varieties.

None of these excel the colour effect of *Cloth of Gold*, which glows like sun-smitten brass, and few deeper *Wallflowers* than *Purple Queen* are seen anywhere about. *Eastern Queen*, of a pale apricot shade, was used in lines pleasingly with the two above, and in massed beds was the *Blood Red* variety—a splendid spring flower. Sutton's Giant strain is notable for large flower spikes, in colours orange, yellow, and crimson. *Faerie Queen*, with pale lemon flowers, is distinctly pleasing; while the *Dwarf Yellow Bedder* and *Brown Bedder* sufficiently indicate their characters, and each of these *Wallflowers* were seen at their best at Bucklebury.

At the south-eastern corner of the house a formal garden is gaily furnished with simple spring flowering plants. Named *Forget-me-nots* provide contrasting colours, as *Myosotis Perfection*, a bright blue, with *Narcissus Barri* conspicuous *M. Royal Blue* (the brightest and best of blues) below other yellow *Daffodils*, and *M. Perfection White*, as a carpet below *N. princeps*. These named *Forget-me-nots* were all from seeds, and it was interesting to note how true to colour each had come. These notes on varieties may be of service to those who desire diversity in a simple way, among early flowering hardy plants.

But undoubtedly the new Dell garden on the south front is the choicest feature of the ornamental grounds. A few years ago this was part of the wild woods, and he was an explorer who ventured there. Now there are sloping lawns, smooth-shaven and dotted with beds of *Japanese Maples*, *Genistas*, *Double Gorse*, *Berberis stenophylla*, *Rhododendrons*,

and many other shrubs. On page 183 there appears a bird's-eye view of the Dell garden, but the photograph gives the impression of a flat stretch of ground, whereas the slope is very considerable and terminates in the water-fall and pool of which a forward view is given on page 179.

A winding path encircles the inner margin of this large section of the grounds, passing from the rockery steps (seen in the foreground on page 183) downward, first to the right, then in a noble sweep to the left, clear by the neat little lake containing carp and other fishes. It was a stroke of boldness and a successful effort of judgment to introduce the rustic summer-house with its heather-thatched roof and accompanying characteristic bridge, into the direct view as seen from the rockery steps. Mr. Alexander Wright, as gardener in charge, has here a valuable testimonial to his skill as a designer, and he is a most successful cultivator both in and out of doors. Our photographs are also from his camera.

The rockery pockets and the artificially made bed and supports of the waterfall, are composed of a stone-like concrete. Since the planting was completed, the numerous shrubs have now developed, and the whole scene presents a view suggesting a long-established garden, with its features well taken care of. The *Japanese Maples* already mentioned have shown no signs of deterioration, indeed they are perfectly at home. *Azalea mollis*, in variety, have also grown well. Hardy *Water Lilies* find a place in the pools, and *Caltha palustris* is highly effective by the water's edge. Thousands of *Daffodils* stud the grassy slopes among the surrounding trees and bushes in the spring-time, and later come the *Foxgloves*, *Verbascums*, *Epilobiums*, and numerous beautiful and choice hardy Ferns as additional subjects of interest. *Nepeta Glechoma variegata*, the white leaved *Ground Ivy*, flourishes out of doors on the shaded banks, and might be oftener used with the same success, for it is quite hardy. It may become uninteresting to the reader if description descends too much to detail, so that the names of dwarf alpine *Phloxes* which thrive so splendidly here, and of the fine collection of *Geums* and other hardy flowers need not be enumerated, but at Bucklebury the aim is to have only those flowers that are worthy of the labour they receive.

The kitchen and fruit garden is in good keeping, and would require to be, in order to meet the demands made upon its resources. *Chrysanthemums* are liberally represented and gave promise to become sturdy plants. Melons were especially fine, and fruits of 3lb weight were borne on each of the plants, five fruits to each. Three or four varieties are relied on, these being *Best of All*, Sutton's *Scarlet*, *Ne Plus Ultra*, and *Ring-leader*. Of *Cucumbers*, the favourites are *Every Day* and *Satisfaction*. Grapes were all creditable. *Gloxinias* among plants were magnificent: I had seen what were considered the best of London trade displays, and the collection at Bucklebury was no way inferior, but rather the superior. *Caladiums*, *Crotons*, stove plants generally, including winter flowering *Begonias*, *Caledonia* and *Turnford Hall* included, each were nicely represented. Splendid *Fuchsias* are grown as pyramids to a height of 7ft, and are placed by the margin of the lake in the Dell Garden during summer. Orchids, and especially *Cypripediums*, are grown largely and well, hybridising having been practised among some of the better known species and named progeny are now included in this collection. Altogether, the garden and grounds here are highly interesting and instructive. Amid his breezy surroundings, the owner must indeed find rest from the pressure and burden of business; he also stimulates a love for cricket and football among the men and youths of the neighbourhood by providing a large playing field and suitable equipment. Nor are the quieter recreations omitted. An ample building has been at the disposal of the community for some years, within which lectures on technical subjects are periodically arranged, and one of the most useful series carried to a successful conclusion was instruction in the "First Aid to the Injured," for which certificates were awarded after examination. Billiards, ping-pong, draughts, chess, and other games demanding skill, are here to be enjoyed.

The district eastward to Aldermaston over the great Common of 6,000 acres, and beyond, is typical of the finest English rural landscape. Magnificent grass rides and roads seam the surface of the Whin covered Common, and here and there one finds a brackish pool, starred over with the beautiful aquatic *Ranunculus*; Heather and Sloes and many wild flowers cover the knolls, while at the verges are *Fir* and *Oak* woods. Through a great *Oak* avenue, with ancient and symmetrical trees, by Hazel woods and Willow holt, meadows with their kine, and here and there a village or hamlet, the tour is made, and on the

way the fortunate may obtain permission to view the Kimberhead Springs, or bubbling pools of water that flow beneath the hills of chalk from higher up, to issue here at Kimberhead, and these most beautiful springs, with unceasing turbulation emerge from their bed of silver sand 40ft beneath the placid surface of the crystal waters. Green they seem, and green, lurid green they are, from their depth alone. The whole inner body of these huge natural cisterns are diversified by aquatic vegetation, green, black, and brown, while lying motionless as in death, one espies the wavy outlines of massive trout. The Beech trees overhead, and Willows by the brink, allow the straggling sunbeams entrance, and whose shafts of golden light pierce downward and illuminate the deepest recesses of this indescribably beautiful scene. Jules Verne in his Nautilus ne'er viewed a subterranean creation more wonderful or more enchanting.—J. H. D.

## Figs Under Glass.

### House for Earliest Supplies.

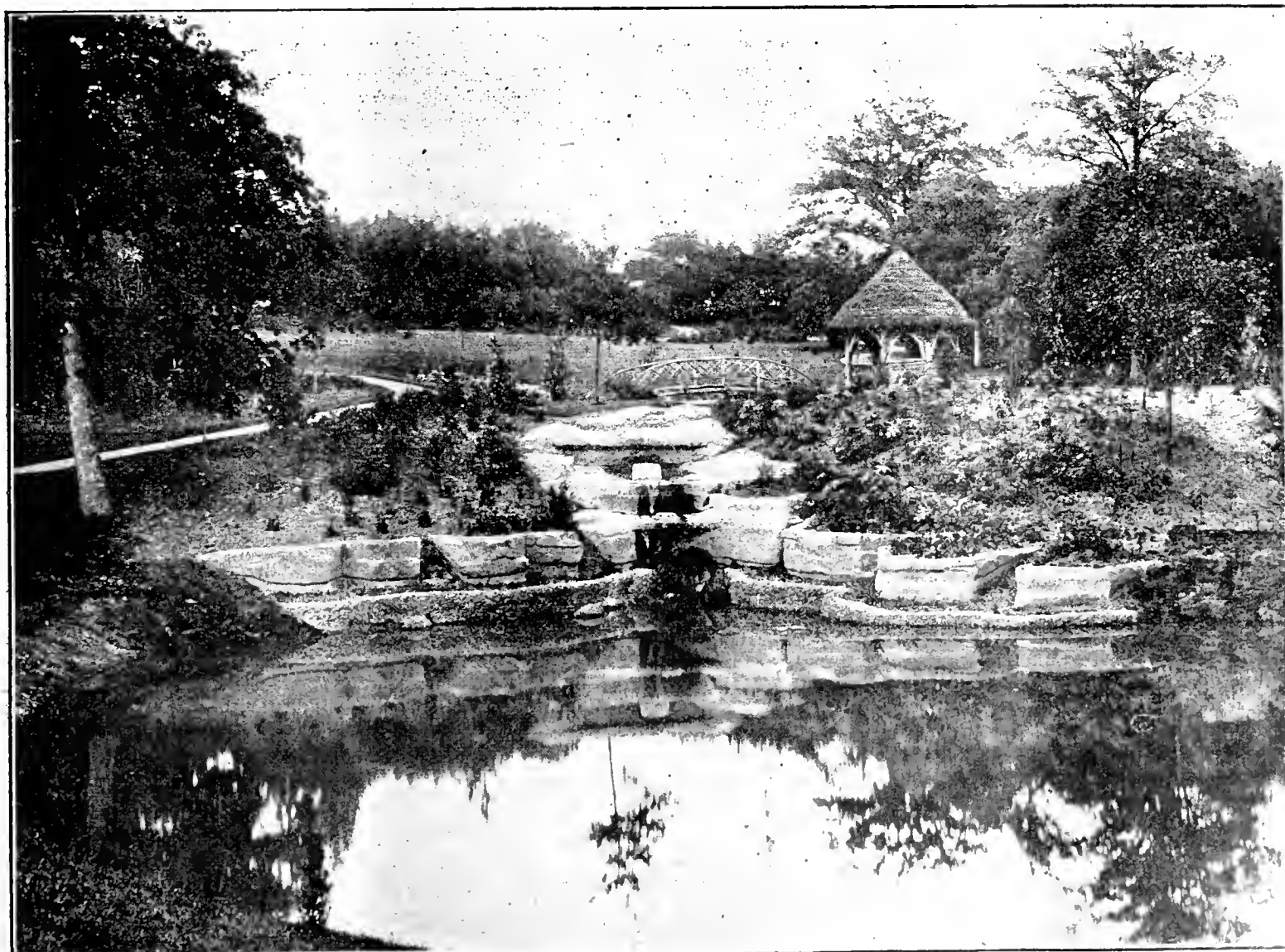
This may contain trees in pots or planted out. The first is much better for securing very early Figs, as the trees are under control, and selection can be made of the most promising for yielding a first crop, which is much the most valuable, dishes of ripe Figs in April being prized, as fresh fruit is not then plentiful, and there is always a charm in variety at dessert. The house should be light, airy, and well heated. A low three-quarter span-roof house, facing the south, is best, with a pit for holding fermenting material, such as Beech, Spanish Chestnut, or Oak leaves, which gives a moist genial heat and moisture over a considerable period, greatly reducing the necessity for fire heat, and more suitable for the Fig trees. Those intended for early forcing in pots may be placed outdoors when the wood is ripe, but they must not be so treated if there is any doubt about this, keeping them under glass, with a free circulation of air. These are matters on which the cultivator will need to exercise his judgment. In either case encourage surface roots by dressings of manure, rough loam, and a sprinkling of superphosphate. See that those placed outdoors do not root from the base of the pot. Cut off all roots that have passed into the plunging material,

top-dress, after which give a good watering, and they will need no more water than suffices to keep the foliage in health.

In the case of the earliest forced planted-out trees, these will now be ripening their wood, and watering may be discontinued, air being given very liberally. If, however, the second crop is not yet ripened, moderate moisture in the soil will be necessary, with a free circulation of warm air to secure quality in the fruit. When the fruit is off, take prompt measures to destroy insects, red spider and scale being the most assiduous, and are annihilated by dressing with petroleum emulsion, applied, after due dilution, with a brush, so as to dislodge the scale.

### Fig Trees Unsatisfactory.

Planted-out trees not infrequently grow rampantly, and, consequently, produce their crops of fruit. In that case lifting and root-pruning should be resorted to, and the roots confined to a narrow border, 3ft to 4ft in width, or not more than one-third the breadth of trellis the trees are to occupy. A trench taken out at this distance from the stem down to the drainage after the fruit is gathered will check the tendency to a late growth, assist in the ripening of the wood, more particularly if the growths are thinly disposed, and the points of the shoots, instead of being closely tied in, are allowed to grow up to the glass. If the drainage be defective, it will be necessary to lift the trees in the autumn as soon as the leaves commence falling, and replant in fresh compost. Place in 12in of drainage, rough at the bottom, and fine at the top, that at the bottom being the size of half-bricks, and in degrees smaller upwards; have the material about the size of road metal at the top, placing on this a 3in thickness of old mortar rubbish, freed of old laths and other pieces of wood, smashed, and sifted with a half-inch sieve, using that remaining in the sieve, the finer particles being suitable for mixing with the compost to the extent of one-sixth. Turfy loam, inclined to be strong rather than light, forms a suitable rooting medium, provided it contains a fair amount of gritty matter, preferably calcareous gravel, or have added to it a sixth part of old mortar rubbish. Where obtainable, a bushel of wood ashes may be mixed with each cartload of loam and a peck of crushed half-inch bones. Other enriching materials may be added and mixed with the soil, but as a rule it is better to supply these in available form as the growth and crop require them, than admix enriching substances, such as horse droppings or farmyard manure with the compost for the borders. When the soil is poor a fifth part of horse droppings or thoroughly decayed manure may be incorporated with the loam.—GROWER.



Scene in Bucklebury Place Gardens.



## Shrewsbury Floral Fête.

(Continued from page 177.)

of 10; harmony, 8 out of 10; general arrangement for effect, 8 out of 10, making a total of 121 points.

With absolutely the same arrangement in the decorations, the second place was awarded to Mr. G. Mullins, gardener to Lady Henry Somerset, Ledbury, who gained 111 points. Madresfield Court Grapes were very handsome in the berry and shape, and one could not grumble at colour and finish. His Melons were excellent, and Peach Barrington, and Dryden Nectarine could not well be beaten. The Figs were behind, and he staged Moor Park Apricots and Gages, as against the Pippins and Pears of his opponent. His Muscat of Alexandria Grapes were creditably finished, and helped him well.

The third award fell to Mr. J. McIndoe, gardener to Sir J. W. Pease, Bart., Guisboro', with 109 points, very close on the second collection. The dishes included Souv. de Congrès, and Triomphe de Vienne Pears, with Peaches, Nectarines, Apples, Melons, Apricots, and Grapes.

### CHAMPION GRAPE CLASS.

The interest in this great class for twelve bunches will be understood when it is stated that nine entrants came forward in contest for the magnificent prizes of £20 in cash and a Silver Champion Cup, valued at fifty guineas, given as the leading award. This cup, however, has to be won three times before becoming personal property. Lord Hastings (gardener, Mr. W. Shingles), Melton Constable, Norfolk, was clearly a leader here with an aggregate of 105½ points out of a possible 112. We cannot adequately describe these fine bunches, the Alicantes and Alnwick Seedling, Gros Maroc, and Muscat of Alexandria. Each were massive and deeply coloured. The white Grapes could have been better finished, but consider the season! It would be interesting to learn what the aggregate weight of the dozen bunches amounted to.

With very handsome Muscat of Alexandrias, wonderfully coloured, the Messrs. D. and W. Buchanan, of Kippen, Stirling, N.B., came second, with 98½ points out of the 112. Black Alicante, Alnwick Seedling, comprised the black Grapes here shown, and these were heavy and very finely finished. Capt. Stirling (gardener, Mr. T. Lunt), Keir, N.B., with 95½, was a good third, his Muscats being Al; fourth, J. H. Goodacre, with 93 points; fifth, J. Martin White, Esq. (Mr. R. Cairns), Balruddery, Dundee, with 88½ points; and sixth, Col. Platt, C.B. (gardener, Mr. W. A. Coates), Gorddino, Llanfairfechan, with 87 points. The second prize included £12 and Messrs Wood and Son's special prize of 8 guineas, the other prizes being £10, £7 10s., £5, and £4.

Class 71, for sixteen dishes of fruit, went to T. Corbett, Esq. (gardener, Mr. F. Jordan), Impney Hall, Droitwich, with perfect Melons, a dish of full-sized Oranges, Cherries, Figs, Apples, Gages, Nectarines, Peaches, Apricots, and Pears (Clapp's Favourite, poor). The Grapes were fair. Second came Mr. J. H. Goodacre, with massive Margaret Marrilat Pear, superb Transparent Gages, late Sovereign Strawberries, and other nice dishes in variety. Hon Mrs. Meynell Ingram (gardener, Mr. R. Davies), Temple Newsam, Leeds, formed a close and very excellent third, having Strawberry Wizard of the North, Bananas, beautiful Pears, and other excellent dishes. Fourth, Mr. Cairns, from Dundee; and fifth, Mr. McIndoe, with smaller fruits than the others.

The leading award for twelve dishes fell to Mr. J. Jones, gardener to Mrs. F. Need, York House, Great Malvern, with an even and bright lot; second, Mr. G. Hall, gardener to Lady Louisa Ashburton, Melchet Court, Romsey; third, Mr. Bannerman, gardener to Lord Bagot, Rugeley, Staffs; and fourth, out of five entries, Mr. Bremmell, gardener to H. H. France Hayhurst, Esq., Wellington.

Class 73.—For a collection of nine dishes, open to Salop only, the Rev. T. M. Bulkeley-Owen, Tedsmore Hall, was first; and second, Lord Trevor (gardener, Mr. Daves), Brynkinalt. For four bunches of Grapes, two blacks and two whites, Lord Harlech, Brogyatyn, led, with Madresfield and Muscat of Alexandria, the former very good. Second out of thirteen came Mr. Goodacre; and third, Lady Wantage (gardener, Mr. W. Fyfe). For two Black Hamburgs, Granville Farquhar, Esq. (gardener, Mr. C. Flack), Cholmondeley Castle, led, followed by Mr. Lunt, of Keir. The latter beat Mr. Goodacre for the single Black Hamburg. For two of Madresfield Court, Mr. Shingler led, and C. R. Fielder came second. For two Alicantes, the order was Shingler and Messrs. Buchanan; while for two of either Gros Colman or Gros Mavoc, the order was Wilkins first, and A. H. Hall, Prestbury, second.

### Vegetables.

These, like the fruit, are always a special picture at Shrewsbury, and the chief nurserymen offer liberal prizes for produce

from their seeds. Taking these seriatim, we have for James Carter and Co.'s prizes in class 105, for a collection of nine kinds, Mr. J. Gibson, gardener to R. W. Hudson, Esq., Marlow, Bucks, taking first award. Everything here was good, and admirably set-up. Mr. Edwin Beckett, Elstree, came second with Cauliflowers, somewhat speckled, and rather green-skinned Onions. Leeks, too, were short; other vegetables were excellent.

For Suttons' special prizes, class 106, nine kinds again; Mr. Gibson also beat Mr. Beckett, but there were a number of very fine collections altogether, and some highly creditable produce was staged. Gibson had splendid Supreme Potatoes, all even and smooth; Onions were good for the season; Tomatoes (Eclipse) were excellent; and Sulham Prize Celery was also grand. Third came the Earl of Lathom (gardener, Mr. B. Ashton), Ormskirk, but the staging of them was not so good. Peas, Celery, and Carrots were handsome.

For Edwin Murrell's prizes the leading award fell to Mr. G. Birch, of Shotts Hall; second, Mr. R. C. Townsend, Chalfont Hall, Bucks; third, Mr. S. Bremmell. The above was for eight kinds. For six sorts the awards ran:—First, Mr. E. Clowes, gardener to Mrs. Cook, Ridgebourne; second, Mr. J. Abbott, gardener to C. Gayse, Esq., Hadnall; third, Mr. G. Gilbert, gardener to Colonel Dickin, Wem. Nothing of merit was shown in the first of these classes, but some splendid Celery and Onions were presented in the succeeding one.

For Webb and Son's prizes (class 109) eight kinds distinct, Mr. E. Beckett led, having choice Cauliflowers of the Early Mammoth variety; also Giant White Celery, good Peas, and Progress Potatoes. Mr. W. L. Bastin, Buscot Park, Farringdon, Bucks, followed next, and showed fine Prizewinner Carrots and Stourbridge Marrow Peas.

For Richard Smith and Co.'s awards in class 111 (twelve kinds), the order was Mr. R. A. Horspool, Ruabon, premier, having nice Turnips, Carrots, and Tomatoes; F. Jordon, Droitwich, second; and G. Davies, Pool Parna, third.

For a collection of twelve kinds, in class 124 (open to all), the leading award of £4 went to Mr. Beckett, who staged Early Autumn Giant, Solid Ivory Celery, Green Globe Artichoke, Maltese Parsnip, Ideal Cucumber, Ailsa Craig Onion, Scarlet Perfection Carrot, Jubilee Runner Bean, Improved Telegraph Pea, Windsor Castle Potato, Duke of York Tomato, and Snowball Turnip. These were arranged as we have named them from right to left in three rows, covering a space of 4½ ft square. Second came Mr. B. Ashton, Lathom House, Ormskirk, with good Onions, Canadian Wonder Beans, and Sutton's Masterpiece Peas; third, Mr. W. Pope, Highclere Castle, Newbury, having very fine Onions, Epicure Cucumber, Bloodred Beet, and Supreme Potato. Mr. W. L. Bastin followed fourth. Five entered.

For the nine kinds, Mr. J. Hay, Rayton Park, beat Mr. H. Huxter, of Henley Hall, Ludlow.

The principal prizewinners in the succeeding classes were Messrs. B. Ashton (for Potatoes), A. H. Hall (Tomatoes), E. Beckett (Cucumbers), Jno. Weston and W. Powell (Peas), D. Breeze (Runner Beans), A. Kuddock (Cauliflowers), G. H. Chaunt (Celery), G. Rosebrow (Parsnips), W. Leith (Carrots), R. A. Horspool (Turnips), and E. Beckett (Onions).

Mr. Robert Sydenham, Tenby Street, Birmingham, offers special prizes for dishes of the various vegetables. The competitor who secures the aggregate of points for prizes is entitled to hold a £15 Silver Challenge Bowl for the year. On this occasion the winner was Colonel O. R. Middleton (gardener, Mr. W. Leith), The Chase, Ross, Herefordshire, with thirty-nine points out of fifty. He has won for the second time, and must again do so, when it will become his property.

### Certificates of Merit.

We name the certificated plants, but the tremendous pressure of the throng in the marquees prevented our seeing the novelties in order to describe them. Cactus Dahlia Loogali, from Hobbies, Limited; Cactus Dahlia Winsome, from the same; Cactus Dahlia Mrs. Clinton, from Mr. S. Mortimer; Cactus Dahlia James Bailey, from the same; Lathyrus latifolius grandiflorus albus, from Hobbies, Limited; new Sweet Pea Dorothy Eckford, from the same; Cactus Dahlia Miss Hetty Dean, ditto; Carnation Edward VII., from Bradley, Peterborough; Asparagus myriocladus, from R. Greenfield, jun., Leamington; Tomato Superlative, from Mr. William Bunn.

### Awards for Non-competitive Groups.

LARGE GOLD MEDALS were awarded to the following:—R. Smith and Co., Worcester, for flowering plants; F. Davis, Woolas, Pershore, for Begonias in pots; Blackmore and Langdon, Bath, also for Begonias; B. S. Davis and Son, Yeovil, for Begonias; Leopold de Rothschild, for Water Lilies; Pritchard and Son, for Japanese plants; Veitch and Sons, Chelsea, for Orchids, Ferns, &c.; Dobbie and Co., Rothesay, for Pansies, Potatoes, &c.; Murrell, Shrewsbury, for Roses; Hartland and Son, Cork, for Gladioli, Begonias; and Hobbies, Limited, Dereham, outdoor flowers.

SMALL GOLD MEDALS were awarded to John Russell, Richmond, Surrey, for greenhouse plants; J. H. White, Worcester, for cut flowers; M. Pritchard, Christchurch, for herbaceous flowers; Jackman and Son, Woking, for cut flowers and Dahlias; A. Meyers, Shrewsbury, for Zonal Pelargoniums; W. B. Child, Accrington Green, for hardy flowers; Kings Acre Nurseries, Limited, fruit trees in pots, &c.; Webb and Sons, Stourbridge, for Gloxinias; James and Sons, Shrewsbury, for group; Robert Bolton, Warton, Carnforth, for Sweet Peas; Jarman and Co., Chard, Sweet Peas, vegetables; Hewitt and Co., Birmingham, for herbaceous flowers; Laing and Mather, Kelso, Carnations; and S. Mortimer, Farnham, Surrey, for Dahlias.

#### Non-Competitive Exhibits.

Mr. Henry Eckford, Wem, Shropshire, showed that when small or medium-sized Cactus Dahlias are arranged in slender, tubular glasses with vegetable Asparagus no flowers can be more graceful or effective. We noticed that the glasses were leaded at their bases, to prevent their being overbalanced. Among the varieties shown were Viscountess Sherbrooke, Lord Brassey, Innovation, Debonnair, Major Tuppenny, Green's White, Radiana, Ranji, Starfish, and Primrose Dame, all of which are distinctive and choice. An admirable group.

Tuberous Begonia blooms, in boxes, were contributed by Messrs. Peed and Son, of West Norwood, London, and we know that this metropolitan house grow these plants largely in the open air to show how that doubles even are useful for bedding. Their selection was varied and good, and the blooms clear.

Sweet Peas were sent by various firms, among whom were Messrs. John Derbyshire, Ashley Road, Hale, Altrincham; R. Bolton, Warton, Carnforth; Jarman and Co., Chard; and others.

Mr. H. Deverell, Banbury, staged an interesting group of hardy herbaceous cut flowers, among which were the showy *Helenium pumilum*, a splendid plant for cut-flower uses—"cut and come again." *Lathyrus latifolius*, *Campanula pyramidalis* alba, *Sidalcea malvæflora*, *Campanula Mariesi*, and other things are all worthy of a place in the borders.

Messrs. Jarman and Co.'s Potatoes, Tomatoes, Parsnips, Roses, Dahlias, and Gloxinias attracted attention; and Messrs. Hewitt and Co., of Solihull and Birmingham, with a fine collection of hardy cut flowers, including some especially fine species, further assisted the general interest. Their yellow-ground Fancy Carnations were exquisite blooms, all of them.

A pretty little group of Violas, bunched and staged in tinware vases, furnished quite a fresh and taking display in a large top tent, from Mr. W. Waters, Accrington Green. All the best and most telling sorts for bedding were included.

The Show and Fancy Dahlias (together with Cactus varieties) from Mr. S. Mortimer, Rewley, Farnham, Surrey, were the only flowers in this section of the genus that we noted, and fine they were. Many were full-sized and grand in form, the favourite varieties being included. Among his Cactus sorts were new seedlings of merit, and of these we may hear again.

Hobbies, Limited (Mr. John Green), Dereham, Norfolk, also contributed a display of Dahlias, arranged in pyramidal grouplets, each representing a variety in their usual tasteful style. They had also the beautiful Everlasting White Pea and some Sweet Peas—the newer sorts—with a galaxy of Crimson Rambler Roses and other decorative sorts for the garden. Their *rubrifolia* is a charming Rose for massing in beds; Liberty was also well shown. Cammas and Gloxinias in ether grouplets, but all in line on the same table, completed a formidable and handsome display.

The Scottish firm of Messrs. Laing and Mather (Kelso) were strong in those lovely Malmaison Carnations which they make a speciality of and cultivate to such perfection. Their Princess of Wales, Calypso, and Lady Middleton were exceedingly fine. Border Carnations were here as well, and they were robust-looking, clean, well-coloured, and meritorious generally.

Another group of Violas, from Mr. W. L. Pattison, Shrewsbury, who is a renowned cultivator of these indispensable flowers, demands notice; but the black cloth beneath the sprays of flowers, as used here, did not in any way help the blue and the brown varieties. A complement of Carnation, dressed and with paper collars, was sent by "Thompson's" from Spark Hill, Birmingham. The new *Asparagus myriocladus* was set up by Mr. R. Greenfield, jun., Leamington Spa, and Sweet Peas were also staged.

A delightful collection of Roses—fresh, strong, and well-arranged—was contributed by Mr. E. Murrell, Portland Nurseries, Shrewsbury. His Niphotos, Perle des Jardins, and other Teas and Noisettes (also T.T.'s) were as fine as any we have seen this year; indeed, the whole group deserves the best praise and more space than we can well devote to its description.

The King's Acre Nurseries, Limited, Hereford, sent a representative collection of fruits. A very large group of hardy flowers from Mr. W. B. Child, Accrington Green, seemed to include most of the best of border plants worthy of growing. Phloxes and Pentstemons were arranged by Messrs. I. House and Son, of Bristol.

From Messrs. Jas. Veitch and Sons, Limited, Chelsea, came a magnificent collection of choice specimen plants, arranged with a groundwork of Ferns and Caladiums. A few Orchids and hybrid Rhododendrons assisted in giving colour to the display. The arrangement was carried out splendidly, for each plant could be clearly seen. The Crotons and Dracaenas were all well coloured, and the whole group was greatly admired by the visitors.

Messrs. Webb and Sons, Wordsley, Stourbridge, were as usual represented by a varied and meritorious collection of flowers and vegetables. Taking the latter first, their Early White Mammoth Cauliflowers were such as enticed passing notice. The "heads" were large, even, fine, and white. Webb's Bountiful Cucumber, Sensation Tomato, New Mainstay Peas, Satisfaction Beet, Prize-winner Carrot, Giant White Celery, and Webb's Emperor Cabbage were also excellent samples. Among flowers they had stout Mignonette, Hollyhocks, Sweet Peas, Stocks, Carnations, &c. Their Gloxinias were a show in themselves.

No finer flowers of tuberous Begonias were seen than those from the Erin's Isle (Richard Hartland and Son, the Lough Nurseries, Cork), the blooms being massive and brightly coloured. Most, or all, or them represented named sorts. Of these were Mr. S. Pope, M. Wannot, Orion, Duchess of York, and many others of merit. Among Gladioli were Osmaldi, Enchantress, Mme. Palmer, Vandeal, Baccanthe, and Hercules.

Messrs. Wm. Wood and Son, Ltd., Sundriesmen, Wood Green, London, furnished an attractive exhibit, even if flowers were quite secondary in this case. They staged their "Coronation" floral suspending baskets, which are stout, large, and finely made. Their Perfecta Syringe was also on view, and the new patent hand-sprayer.

Mr. J. Wood, Penrith, had Sweet Peas, and Wood's Centenary new Dwarf French Bean.

Dickson's, of Chester, displayed Phloxes chiefly, and among these were such notable sorts as Amabilis, salmon-pink; Clemena Bouton, rose; Felatante, crimson; Le P. Haequart, violet; Frau S. Buehet, rose-purple, and The Queen, white. They also had Carnations, Crinums, Antirrhinums, Romneys Coulteri, Gladioli, Pentstemons, Iris laevigata (Kämpferi), Montbretias, and other handsome things.

Messrs. Barr and Sons, London, had Water Lilies, Violas, Phloxes, Kniphofias, Reseda alba, Statice latifolia, Pyrethrum, and other border flowers of merit.

Some rare plants from Messrs. Bull and Sons, 536, King's Road, Chelsea, London, included Caladium Gireond, Draena Victoria, Aralia triloba, Anemia rotundifolia (a beautiful subject), Polypodium irioides ramo-eristatum, Draena Lord Roberts, Eugenia myriophylla (bushy and plumose) Ceropegia Woodi, and Asplenium marginatum.

Amongst the "novelties" or new features at Shrewsbury on this occasion was a collection of Potatoes from Dobbie and Co., Rothesay. We counted seventy-six lots, in almost as many varieties, saying which it is unnecessary to go further. The Factor, a new sort, is clean-skinned, even, and more or less kidney shaped. Dobbie's Favourite is another worthy Potato, and so were Duke of Rothesay, Ninetyfold, The Sirdar, Satisfaction, Evergood, and British Queen. They had also Sweet Peas (very robust and large), Violas, and their renowned lemon and orange coloured African Marigolds. Jackman and Co., of Woking, had hardy plants, and Jones and Sons, Shrewsbury, had Sweet Peas.

Mr. B. R. Davis, Yeovil, arranged a grand collection of Double and Single Begonias. The flowers were large, and the plants well flowered. A few of the most striking were Marchioness of Bath, Masterpiece, W. Sparshot, Countess Cromer, Achievement, Clio, and Mabella.

Aquatic plants came from Mr. James Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury, and a most pleasing change they made, too. The greenery of the Water Reeds and other foliage used as a background, had a fine effect. The Nymphaeas included good bowls of N. marliacea albida, N. tuberosa, N. Andreana, N. Lucida, N. Odorata rosea, N. Ellisiana, N. M. Chromatella, N. Stellata, N. Gloriosa.

Messrs. Blackmore and Langdon, Twerton Hill Nurseries, Bath, contributed a glorious display of double Begonias, nicely arranged with Ferns and foliage plants. The flowers were excellent in every way. The best were Hon. Joseph Chamberlain, Miss Dorothy Hardwieke, Marchioness of Bath, Ida, and W. Sparshot.

It but remains to add that the proceedings all through were well arranged, and that while the attendance was said to be slightly less, everything augurs well for a highly successful record in this, the Coronation year. Quality seems to go on improving, to the great satisfaction of all who are interested in the best horticulture. It is well remarked that no one need show anything but the best at Shrewsbury, and cultivators know it. The joint honorary secretaries, Messrs. Adnitt and Naunton, are as able as they are earnest and enthusiastic, and very great credit is due to them.

The remainder of the report will appear next week.



## Societies.

### Royal Horticultural—Drill Hall, August 18th.

Gladioli from Kelway, pot Plums from Veitch, Crotons from May, and hardy plant groups were the main features of Tuesday's meeting in the Drill Hall. On the whole the exhibition was interesting, though sparsely attended, owing to the holiday season, and the fact that the gentry are now largely out of London. At 3 o'clock Mr. W. H. Patterson, of the Swanley Horticultural College, gave a lecture on "Horticultural Education in England."

#### Floral Committee.

Present: Wm. Marshall, Esq. (in the chair), with Messrs. James Walker, H. B. May, J. Jennings, J. F. McLeod, G. Reuthe, C. Dixon, R. W. Wallace, C. E. Pearson, E. H. Jenkins, W. P. Thomson, J. W. Barr, J. H. Fitt, C. Blick, Geo. Paul, Geo. Gordon, E. T. Cook, Wm. Howe, J. Fraser, and Wm. Cuthbertson.

That Messrs. Storrie and Storrie, of Dundee, are among the most progressive firms in Scotland, we in the south have had frequent and ample proof of late. On this occasion they staged a varied group of *Streptocarpus* (multiflora type), and of named bedding Lobelias; and also *Celosias* and single *Begonias*. The latter were very large and beautiful, the colours highly pleasing. Storrie's *Invincible Lobelia* (a dark blue) is most compact, showy, and floriferous.

Messrs. Ware, Limited, had one of the usually interesting tables with hardy cut flowers, with *Phloxes*, *Lobelia cardinalis grandiflora*, and lovely scapes of *Crinum Moorei*. On the opposite side Messrs. Cannell staged massive bunches of annuals, such varieties as we noted under "Gadding and Gathering" some weeks ago. Mr. H. B. May contributed a brightly coloured collection (ten varieties) of Crotons, grown up to the best market standard.

Another handsome hardy plant group came from Mr. Pritchard, of Christchurch, who always selects imposing bunches of the very finest border plants. We noticed *Montbretia Fiery Star*, *Rudbeckia purpurea*, *Dracocephalum virginicum*, and *Crinum Powellii* among other things. From Barr's, of King Street, Covent Garden, we had a charming contribution of Pansies and Violas, *Phloxes*, *Kniphofias*, *Pentstemons*, and *Watsonia Ardernei* among other things. Mr. Amos Perry, Winchmore Hill, London, N., was another who assisted with hardy flowers.

The only group of Roses that graced and scented the sombre Hall was from Paul and Son, of Cheshunt. They staged *Caroline Testout*, *Johanna Seebus* (H.T.), *Lady Battersea*, now gone very light in colour; Paul's *Cheshunt Scarlet*, a bright and deep red H.T.; with *Killarney* and other varieties in large bunches.

*Cactus Dahlias* from Mr. H. Shoesmith, Westfield, Woking, reminded the visitors that "once again the autumn comes," and leafless woods shall soon be seen. For a handsome new crimson variety named *F. A. Wellesley* he received an Award of Merit. The grouplet included a dozen new sorts.

Messrs. Kelway, from Langport, staged a Silver-gilt Flora Medal group of Gladioli, set up erectly in vases, there being four lines of spikes one behind the other, and occupying an entire table. Some 230 spikes were tabled, and among the newer varieties on view were the following: *Coronation*, which received an Award of Merit; the spike is close and very broad, each flower being large and of great substance. The inside of the throat is flushed bluish, with deep crimson blotches on the under segment. The rest of the petals are white in colour. *Edward VII.* is a handsome scarlet; *Sir Alfred Gaselee*, lilac-purple; *Silver Stick*, bluish and cream-suffused; *Duke of Beaufort*, of enormous size, and coloured salmon-scarlet; *Duke of Norfolk* is another crimson scarlet of merit. In the general collection there were *Winnie Talbot*, *Vivid*, *Remus*, *General French*, *Grenfell*, *Countess Craven*, *Prince Henry*, *Fashoda*, *Cellini*, and *Mrs. Wood*. These present a goodly range of colour.

A beautiful assortment of Hollyhocks were sent by Messrs. Webb and Brand from Saffron Walden, of which the more telling varieties were *Suna*, creamy; *Constance*, pink; *Princess*, deep rose; *Alfred Chater*, deeper still; *Ovid*, of a brighter tint; *Walden Primrose*; and among darks *Exultum*, *Purple Prince*, *Crimson Queen*, and *Black Knight Improved*. Some of the spikes had a dozen full and fresh flowers expanded.

Messrs. Wm. Bull and Sons, 536, King's Road, Chelsea, S.W., sent a fragrant grouplet of *Lilium auratum virginale*, which is very graceful, with a yellow midrib to each white segment and no spots. A lovely flower.

*Ericas* and *Statice* in variety came from Messrs. Hugh Low and Co., Bush Hill Park, N., and they also had some choice Orchids.

A fine collection of Water Lilies was sent by Mrs. Davies Evans (gardener, Mr. Fox), Highmead, Llangbyther, but the

dullness was against their opening. A most creditable contribution.

#### Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair), with Messrs. James O'Brien, J. G. Fowler, De B. Crawshaw, Walter Cobb, F. A. Rehder, E. Hill, W. H. White, F. W. Ashton, H. Pitt, W. Thompson, and H. Little.

Messrs. Hugh Low and Co. staged *Cypripedium niveum*, *C. Nandi*, a beautiful hybrid; *Laelia majalis*, *L. elegans*, and *Cattleya Eldorado splendens*. Messrs. Sander and Sons also contributed some nice samples, as also did the President of the Society.

From W. M. Appleton, Esq., Tynycold, Weston-super-Mare, a number of *Cypripeds* were sent. From Mr. H. Little, The Barons, Twickenham, came a nice flower inflorescence of *Laelia crispa*. Others also sent one or two plants.

#### Fruit Committee.

Present: H. Balderson, Esq. (in the chair), with Messrs. Jos. Cheal, H. Esling, Alex. Dean, F. Q. Lane, H. J. Wright, and Geo. Kelf.

His Grace the Duke of Northumberland (gardener, Mr. G. Wythes), Syon House, Brentford, staged Vegetable Marrow Wythes' Prolific, with Melon-shaped, dark green-skinned fruit.

For two dozen odorous Peaches W. W. Shuter, Esq. (gardener, Mr. T. Armstrong), Belsize Grove, Hampstead, received a vote of thanks.

Plum McLaughlin's Gage from Mr. Kelf, South Villa, Regent's Park, also brought him an Award of Merit.

*Monstera deliciosa*, though a very tasty fruit, is seldom seen on show boards, but two fruits came from C. C. Pain, of Haverstock Hill, and were exceedingly large.

Messrs. James Veitch and Sons, Limited, Chelsea, S.W., arranged a splendid group of pot-grown Plums and Gages. These were models of perfect culture, being bushy, well-furnished with stout wood, healthy foliage, and plenty of good fruits; all as clean as could be. The varieties were *Grand Duke*, *Jefferson*, *Golden Transparent*, *Gage*, *Reine Claude Hathem*, and *Coe's Golden Drop*. A finely-grown Wineberry was also exhibited.

#### Medals.

FLORAL COMMITTEE.—Bronze Flora for group of Water Lilies to Mrs. Davies Evans. Bronze Banksian for group of Crotons to Messrs. J. W. Bellgrave, Hammersmith. Silver-gilt Flora for group of Crotons to Messrs. H. B. May, Edmonton. Bronze Banksian for group of plants to P. Purnell, Esq., Streatham. Silver-gilt Flora for collection of Gladioli to Messrs. Kelway, Somerset. Silver Flora for collection of cut flowers to Mr. Pritchard, Christchurch; for collection of hardy plants to Messrs. Ware, Feltham. Silver Banksian for collection of cut Roses to Messrs. Paul and Son, Cheshunt; for group of *Begonias* and *Lobelias* to Messrs. Storrie and Storrie. Silver Flora for collection of cut flowers to Messrs. Cannell and Son. Silver Banksian for collection of Hollyhocks to Messrs. W. Band, Saffron Walden. Vote of Thanks to Messrs. Hugh Low, Enfield, for group of *Ericas*; for collection of hardy flowers to Messrs. Barr and Sons; and to Messrs. Amos Perry.

FRUIT COMMITTEE.—Silver-gilt Knightian Medal to Messrs. Veitch and Sons, Chelsea, for Plum trees in pots.

#### Certificates and Awards.

*Buddleia variabilis* var. *Veitchiana* (J. Veitch and Sons, Ltd.).—Bright heliotrope colour, and the spikes of bloom, 12 to 15 in long, are 3 in broad. A splendid and very choice shrub. (First-class Certificate.)

*Caladium Gircoud* (Wm. Bull and Sons).—Leaves of moderate size, creamy ground, splashed here and there with purple and green. (Award of Merit.)

*Carnation The Shah* (M. R. Smith, Esq.).—A robust, yellow-ground *Carnation*, with deep, bright crimson wedge down the centre of each petal. (Award of Merit.)

*Cattleya* × *Lady Ingram*, Westfield variety (F. Wellesley, Esq.).—Few Orchids have the quality of fragrance, but this beautiful hybrid is peculiarly and attractively odorous. The sepals, which are 4 in long and half an inch broad, are pale bluish; the petals are broader and wavy at the edges, but the lip is exceedingly bright, being a dazzling orange in the main body part, with amaranth at the edge. The extreme edge is fringed and pale lilac coloured. A large flower. (First-class Certificate.) Grower, Mr. F. Gilbert, Westfield, Woking.

*Cordylone indivisa* var. *P. Elder* (P. Elder, Esq.).—A most graceful, narrow-leaved, chocolate coloured variety of excellence. (Award of Merit.) From Forbes House, Ham.

*Dahlia F. A. Wellesley* (H. Shoesmith).—A rich crimson *Cactus* variety, of fair size, and beautifully narrow fluted petals. (Award of Merit.) From Westfield, Woking.

*Gladiolus Coronation* (Kelway & Son).—More after the *Gandavensis* type. The flowers are large and of much substance, mostly white with a rosy throat and deep crimson blotch on the lower petal. (Award of Merit.)



Bird's-eye View of the Grounds at Bucklebury Place.

*Gladiolus Empire* (Kelway & Son).—A Nanceanus cross, with open flowers and rich yellow throat. The general colour otherwise is pale rose, with stripes of purple. (Award of Merit.)

*Kniphofia Rufus* (M. Pritchard).—Very showy, with stout spikes, bright yellow below, reddish at the apex. (Award of Merit.)

*Lælio-Cattleya Ingrami*, *Roslyn variety* (H. T. Pitt, Esq.).—A variety with a superbly handsome lip, large in proportion to the segments, and coloured blackish-purple of velvety texture. The petals and sepals are deep mauve. (Award of Merit.) Grower, Mr. Thurgood, Stamford Hill.

*Senecio clivorum* (J. Veitch and Sons, Ltd.).—A new species (4½ ft) from Central China. Leaves green, and shaped like those of *Petasites vulgaris*. The branched inflorescences bear starry flowers, 3 in across, and coloured deep golden. (Award of Merit.)

### Weston-super-Mare, August 12th.

The showery weather which has dealt hardly with many horticultural fixtures this year, was scarcely less kind on the morning of Weston Show day, though later in the forenoon sunshine helped to make some amends. Unfortunately of late years unfavourable weather and laxity of patronage has gone far to reduce this once flourishing society to a state of despondency, if not of despair. The great excellence of the exhibition itself in every section is well maintained, and exhibitors extending over a large radius contribute to the wealth of the varied display.

In the class for twelve plants, four of which must be ornamental foliaged, Mr. J. Cypher won in his well known style. Mr. Wm. Finch, Coventry, competed for the second prize with good specimens unnamed. With six flowering specimens Mr. Cypher was again an easy first, and also won with six ornamental foliage plants. The Cheltenham nurseries carried away the prizes for single specimens. Messrs. Finch, Coventry; and Hallett, Bath, also competed successfully. With a group occupying 100 square feet, Mr. Finch won well from Messrs. Brooks and Son, Weston-super-Mare. Humcas, very finely grown, were a conspicuous feature in Messrs. Brooks' group. Mr. Cypher's first prize exhibit of Orchids comprised *Lælia elegans*, *Cypripedium Curtisii*, *Aërides Lawrenceana*, and *Cattleya gigas*, and from the same exhibitor came *Cypripedium Callo-Rothschildii*, in a class for a new or rare plant.

Specimen-trained Zonal and Ivy-leaved *Pelargoniums* were numerous, very bright, and well grown, and the same remarks apply also to *Coleus*, *Liliums*, and table plants. Fuchsias and Ferns were poor; indeed, far below the standard of the Bath and Trowbridge Shows.

Roses from Messrs. Perkins, of Coventry, and Messrs. Townsend and Sons, Worcester, were unusually good for the season. Sweet Peas filled a large space, and both their quality and variety were choice. Asters were numerous, though undersized; Dahlias scarce; Carnations, annuals, herbaceous and other cut flowers all very good.

In the first section, quality rather than quantity prevailed, there being marked evidence of the influence of the untoward season. For a collection of eight dishes Colonel Vivian, Rood Ashton, Trowbridge (gardener, Mr. W. Strugnell), was the only competitor, staging Black Hamburg and Muscat of Alexandria Grapes, Stanwick Elruge Nectarines, Sea Eagle Peaches, Brown Turkey Figs, Hamstead Park Melon, Apricots, and Cherries. With four dishes, Colonel Bramble (gardener, Mr. Daffurn), won from three other entries, his Dymond Peaches being exceedingly fine in size and colour. He also won with the same variety the prize for a single dish of Peaches, equally fine. The Rev. A. J. Burr, Uphill, was first with three bunches of Muscats, good in colour and bunch, W. Howell Davis, Esq., Bristol, with Buckland Sweetwater, the first prize for any other white. J. F. Hall, Esq., Wells (gardener, Mr. J. Ayres), won with beautifully finished clusters in the class for Black Hamburgs, and Mr. Daffurn that for Madresfield Court. Mr. Strugnell scored with Nectarines and Pears.

Vegetables were strikingly good; Peas and Runner Beans distinctly so, and there were even greater merit and extent of competition in the cottagers' section than in the open classes. Onions were immense; Cabbages clean and tender; Parsnips and Carrots of ample length; Cauliflowers, despite the bad weather, were good; and Potatoes very superior.

Decorated tables spoke eloquently of the interest taken by ladies in this section of the show, and in the varied choice of flowers and colour blending there was much to admire. Messrs. Perkins' bouquet and floral baskets were marvels of skilful workmanship, and Messrs. Brooks' exhibits in these classes were also of high merit. Mr. Marche, the secretary, and his practical committee deserve from exhibitors much praise for the excellent management in every department of the show.



### Bishops Stortford, August 13th.

Fine weather favoured this important horticultural event of the Eastern counties. The show took place at The Grange, Bishops Stortford, the country seat of John Barker, Esq. The gardens and extensive glass houses were also open to the public, about 7,000 of whom attended the show. Trade exhibits were excellent. Mr. Mortimer, nurseryman of Farnham, showed some grand Cactus and decorative varieties of Dahlias, two of which were new and were awarded certificates. Paul and Son, of Cheshunt, gained first prize for cut herbaceous flowers.

The competitive exhibits for "groups of plants arranged for effect," are always among the first things visitors turn to. The first prize was won by Mr. A. Jefferies, gardener to John Balfour, Esq., Moor Hall, Harlow, Essex, having a splendid arrangement in which *Humea elegans*, *Kalanchoe*, *Campanulas*, *Gloxinias* and *Crotons*, &c., were used with great taste. Mr. W. Clark, gardener to C. Gold, Esq., Stanstead, was second. Mr. W. Harrison, gardener to Colonel Archer Houlton, of Hallingbury Place, third; and Mr. Richardson, gardener to Sir James Blythe, Bart., of Stanstead, was placed fourth.

Fruit is always well shown at Bishops Stortford. Mr. Harrison was well to the fore in a collection of six kinds of fruit; Mr. G. Beech, gardener to John Barker, Esq., was second; and third, Mr. J. Bailey, M.P. In black Grapes of any kind, Mr. Harrison showed grand bunches of Madresfield Court.

Vegetables were well shown, there being six competitors for a collection of twelve kinds. Mr. Jeffries was placed first, with a well set up lot of good quality. Mr. Taylor, gardener to Mrs. Gee, of Bishops Stortford, was second; Mr. Harrison was third.

Ladies' table decorations are always a feature at this show, and there were thirty-six entries. Mrs. G. E. Osmond, of Birmingham, won first prize, and this was of the value of seven guineas; Miss Dickson, of Harlow, was second. Mr. Green, of London, judged the table decorations. Mr. James Douglas, V.M.H., Mr. G. Wythes, V.M.H., Mr. James Vert, of Audley End, and Mr. H. Lister, gardener to Lady Warwick, were the other judges.

### Chippenham, August 13th.

During a long course, extending over thirty years, this society recalls but two wet days, and though the elements were of a sullen nature in the morning of the 13th, the prospects became more favourable later, and a large (though it is said reduced) patronage was shown in the day's receipts. Hardenhuish Park, placed at the disposal of the society by H. E. Clutterbuck, Esq., is an ideal spot for a flower show, ample space and abundant tree shelter being there.

The schedule provides no less than 222 classes in the several sections, though to us many of them appear superfluous because of the repetition providing for the "open" and district severally. The cottagers' section, both in fruit and particularly in vegetables, were pronounced excellent by the judges.

In the class for a group of plants there was a brisk competition, but Messrs. E. S. Cole and Son, Bath, won easily by the superb quality of their material, though the marginal finish did not please the judges. Mr. Bible, gardener to Prince Hatzfeldt, Draycot House, was placed second with an arrangement somewhat stiff in character, but with plants of good growth and variety. Mr. Strugnell, Rood Ashton, was third. The last-named well deserved the first prize for three Palms, Messrs. Cole and Wood and Son, Sudbury, following. Mr. George Tucker, Hilperton proved the victor in the classes for Fuchsias, Ferns, tuberous Begonias, Zonal Pelargoniums, and trained stove and greenhouse flowering plants. Mr. Bible, with excellent table plants, was first, and Messrs. Stokes and Son second.

With thirty-six varieties of Roses Messrs. Cooling and Sons, Bath, were first; Messrs. Jeffries, Cirencester, second. Mr. Hocper, Bath, took the first prize for twenty-four varieties. Messrs. Cray and Sons, Frome, won with each class of Dahlias, and Mr. J. Tucker, Bath, was most successful with Asters, Carnations, Pansies, bunches of cut Geraniums, *Gladiolus*, herbaceous and other cut flowers were well shown by local and distant growers.

Decorated tables were well done. Messrs. Cole and Son, with a choice selection of Orchid blossom, Ferns, and Grasses, proved easy winners. Messrs. Davis and Son, Swindon, were second, also with a choice assortment; Mrs. Woodland, Frome, third.

Fruit was not represented in the same quantity as is customary, and the quality was good. The collection of eight dishes, which last year was keenly contested, found only two competitors. Colonel Vivian, Rood Ashton, being an easy first; B. de Bertodano, Esq., Malmesbury, was second. Dr. Crisp, Corsham, brought beautifully finished Black Hamburgs for the prizes offered for black Grapes, and he also won in the district

section in a similar class. Mr. Strugnell won with three dishes of Peaches and also with Pears. Prince Hatzfeldt, with fine Black Eagle Cherries, easily took the first prize in that class. Apples, Plums, Melons, and other fruits were fairly numerous and good. A particularly good dish of Humboldt Nectarines secured the first prize for T. Harriss, Esq., Calne. Messrs. Blackmore and Langdon, Twerton, staged cut blooms of their famous strain of double Begonias, which were much admired; and Mr. G. Humphries, Kington Langley, contributed an excellent group of Zonal Pelargoniums in pots, in each instance not for competition.

### Dudley, August 13th and 14th.

This recently formed society's horticultural show and fête was held in Buffery Public Park on the above dates. The exhibits were staged in four large marquees, including a bee and honey show. It was about eighteen years ago since a similar show was held in the town, when the ancient and historical Dudley Castle was utilised for the purpose, but owing to unfavourable weather, the financial result was so discouraging, that another attempt in the same direction was not made. However, small successful Chrysanthemum exhibitions have taken place, but during recent years were abandoned. Chiefly through the energy and speculation of Mr. Howard Dickinson, assisted by the chairman of committee and other members, a capital exhibition resulted on this occasion. Unfortunately, however, owing to the unpropitious weather on the first day, the attendance of visitors was very small.

There were 108 classes scheduled, and about 800 exhibits, and the advertised prize money reached £170. Mr. W. Vause, Leamington, secured the first prize in the class for a group of plants for effect, and it proved to be one of his best efforts. The second position was accorded Mr. G. Hancox, West Bromwich, for an arrangement even more elegant than the former, but lacked the richly coloured *Codiaeums*. The third prize was taken by Mr. J. P. Mansell, of Dudley.

For twenty stove or greenhouse plants, twelve in bloom and Orchids excluded, Mr. Vause was to the fore; the second prize going to Mr. J. P. Mansell. Mr. J. R. Horner, Dudley, led for six *Dracenas*, and the second to Mr. W. Manning, Dudley. Fuchsias and Begonias were fairly well shown.

Cut flowers were a fine feature, and in the class for nine varieties of hardy herbaceous flowers, Messrs. G. Gibson and Co., Bedale, Yorkshire, were placed first; while Mr. J. H. White, Worcester, was second, and Mr. W. F. Vernon third. For nine bunches of stove and greenhouse flowers, Mr. J. V. Macdonald, gardener to Mr. J. H. Kenrick, Whetstone, Edgbaston, won with a beautiful exhibit, consisting of two varieties of Japanese hybrid *Rhododendrons*, *Franciscea eximia*, *Nerium grandiflorum*, *Pancratium fragrans*, and *Ixora*, *Lapageria rosea*, *Habrothamnus elegans*, and *Lilium lancifolium rubrum*; second, Mr. W. Vause; and third, Mr. G. Hancox. Roses were fairly well shown for the season. The first prize for twelve blooms (nurserymen excluded) was awarded to Mr. W. F. Vernon. For twelve vases of Carnation, the first prize fell to Messrs. Hinton Bros., Warwick.

For a collection of Cactus or other Dahlias, of which there was an attractive display, Messrs. W. B. Rowe and Sons, Worcester, and Messrs. W. Pemberton and Son, Walsall, were the respective winners with excellent blooms. *Gladioli* formed a fine feature, and the spikes in the first and second winning stands were grandly staged. For twenty varieties, Mr. J. R. White, and G. Gibson and Co., of Bedale, were placed so. For twelve spikes, Mr. W. Waldron was the only exhibitor. For a display of cut flowers and plants, Messrs. W. B. Rowe and Son were placed first, and Mr. F. A. Godfrey second, both with fine displays.

There was a very good exhibition of fruit. For two bunches of black Grapes, Mr. C. Crook, gardener to the Dowager Lady Hindlip, Droitwich, was to the fore with fine bunches and berries of Black Hamburg. For two bunches of white Grapes, Mr. C. Crook was again first, with excellent Muscat of Alexandria; and second, Mr. T. W. Crook, Dudley, with good Buckland Sweetwater. A very fine dish of Apricots, the only one, was shown by Mr. C. Crook. For a scarlet-flesh Melon, Mr. J. R. Horner was first, and Mr. C. Crook second. For a white or green-flesh Melon, Mr. C. Crook was first; and Mr. J. R. Horner second. There was only one exhibit of Peaches, and Mr. C. Crook was the prizewinner. It may be remarked that, especially in the vegetable classes, the names of the exhibits were conspicuous by their absence, a failing which is, unfortunately, not confined to the Dudley Show. Vegetables were, in the majority of instances, remarkably well shown, both in the collections and single exhibits; the chief prizewinners being Messrs. C. Crook, W. Pemberton and Son, W. Pearson, W. Marple, W. Waldron, and G. Hancox. In other classes there was a keen and strong competition, and such as Peas, Onions, Cucumbers, Celery, Cauliflowers, Parsnips and Carrots were very good. The cottagers' classes were also well represented.

Honorary awards were made to Messrs. R. Smith and Co., Worcester; Mr. W. B. Rowe; Messrs. Hinton Bros.; Messrs. Dickson and Co., Chester; Mr. J. H. White; Mr. F. Godfrey; Mr. G. Gibson, Bedale; and Messrs. Hewitt and Co., Solihull, for fine exhibits, principally of hardy garden flowers, Carnations, and other subjects.

### Rock Ferry, August 14th.

The second annual exhibition was held in the Olympian Gardens on the above date. The prizes were sufficient to attract many growers from the Liverpool side of the river Mersey, the entries numbering over 800. Mr. T. B. Kendall, the energetic chairman, Mr. Moffatt, the secretary, and the committee did yeoman service for all present.

Four groups of plants were arranged, the winner being Mr. Geo. Osborne, gardener to Dr. Cook, Tue Brook. Francoas, Orchids, and a rich assortment of foliage plants were beautifully arranged and blended. Mr. H. Ogden, another Liverpool grower, was second; and Mr. Delamore, gardener to E. Johnston, Esq., Bromborough, third. There were two classes of six stove and greenhouse plants, Messrs. Osborne and Ogden winning. Pelargoniums, Fuchsias, Begonias, table plants, and Ferns were of superior quality. Messrs. A. J. Oakshott, J. Roby, F. Powell, J. H. Kenton, E. Johnston, and Mr. D. McLean, gardener to Mrs. Kendall were the prizetakers. For the miscellaneous group of plants (45 sq ft), Mr. H. Morris, gardener to G. Atkin, Esq., scored very highly.

**CUT FLOWERS.**—Eight ladies competed for the table decorations. Mrs. Howell gained the victory with a central basket and four corner vases of *Coreopsis* and *Gypsophila*, *Adiantum gracilimum* and dark *Coleus* forming a tracing over pale-green chiffon. Miss J. Kendall, Lancelyn; Mrs. W. H. Kendall; Mrs. H. Ogden; and Miss F. Oakshott were also chief prizewinners.

Mr. Osborne had a superb collection of indoor flowers. A charming piece of the useful *Oncidium flexuosum* from Mr. Little, gardener to G. H. Pilkington, Esq., could not be denied honours for the single Orchid. Undoubtedly, a feature of the show was the grand collection of Carnations and Picotees shown with their own foliage and buds, and not "dressed." In this, Mr. J. Clarke, gardener to H. D. Trelawny, Esq., Shotwick Hall, scored a splendid victory with perfect flowers of Cecilia, Alexandra, Comet, Goldyllocks, Hidalgo, Lauzan, Aurelian, The Naiad, Bedemere, Bella Donna, and Fair Maid. A good, but flat, arrangement came from Mr. Brownbill; and a third from Mr. J. Bryan, who led for eighteen. Miss F. Oakshott and Mr. J. Clarke had the best collection of outdoor flowers. Rose prizes went to Messrs. Hodgson and Killick.

**FRUIT.**—"Quite perfect," was the opinion of all present, regarding the fruit. Mr. Richards had highly finished Black Hamburgs and Madresfield Court, and there was great competition. Mr. Ferguson defeated all comers for Buckland Sweetwater and Muscat of Alexandria Grapes, Pineapple Nectarines, and a scarlet Melon. The best green-flesh Melon, Sutton's Royal Sovereign, came from H. D. Trelawny, Esq. Hardy fruit was of very great excellence, Mr. C. Irvine winning handsomely.

**VEGETABLES.**—A huge display was brought forward, the winner for nine distinct kinds being H. D. Trelawny, Esq., with fine Ailsa Craig Onions, Magnum Bonum Cauliflower; Dobbies' Purple Beet; Best of All Runner Beans (fine); and Standard Bearer Celery. Mr. Little, gardener to G. H. Pilkington, Esq., Wheat-hill, Roby, was a close second. For Beet, Onions, Runner Beans, and Turnips the former exhibitor led, Mr. Pilkington taking the prizes for Celery, Vegetable Marrows, and French Beans. Mr. Hargreaves won with a capital six varieties. Mr. Carter, a farmer's son, essayed to enter the lists in both sections, and easily secured the single classes for Carrots, Beet (Dobbies' Purple), Alderman Pea, Eclipse Cauliflower, Ailsa Craig Onion, Model White Turnip; and had also six seconds and six thirds. Messrs. J. Lee, W. Coathrup, T. Joynson, and H. Rutter did remarkably well also.—R. P. R.

### Sheffield, August 14th.

This society must be congratulated upon the pluck and perseverance it has exhibited in its endeavours to establish a show on altogether different lines to what has hitherto obtained in the locality. Founded three years ago by the exertions of its secretary, Mr. W. Lewendon, the society at once recognised the importance of open classes, and the well-known exhibitors whose names appear in the prize list is evidence that it is growing in popularity and importance. Unfortunately, it has each year met with unfavourable weather, which has prevented the expansion of the prize list to the extent the committee desired, and a deficit has had to be faced both last year and this. Then, again, while the City authorities are ready to support an agricultural show, both financially and otherwise, it holds severely aloof from a flower show; and while it lends its public parks for the one, takes a great deal of persuasion to do so for the other, and delays its

decision to such an extent that it is tantamount to a refusal. Under these circumstances it is much to the credit of its officials that they have striven to overcome the difficulties, and that a really good show has been the result.

In the class for a group of plants, Mr. J. S. Sharpe, of Valley Nursery, Huddersfield, took first prize with a magnificent collection, much admired for its lightness and artistic arrangement. He had a fine specimen of *Cocos Weddelliana* for a centre, with some capital *Crotons*, *Acers*, &c. Messrs. Artindale and Son came second with a handsome group, in which fine *Crotons* figured, but it was somewhat heavier in appearance; Mr. A. Sheridan, gardener to J. Bassett, Esq., was a good third.

Roses made a good display, and the society aims at having a good Rose competition. Messrs. Harkness and Co., Hitchen,



*Arnica montana.* (See page 171).

staged a grand assortment, which secured first prize and the Challenge Cup; Mr. W. H. Frettingham, of Nottingham, being second, and Mr. H. V. Machin, Worksop, third. In the class for twelve varieties, Harkness and Co. were again first; J. Barrow, Leicester, second; and H. V. Machin third.

For bouquets, Artindale and Son were first, and S. W. Seagrave second. Certificates of merit were awarded to Messrs. Artindale for Fruit, Carnations, and Floral Designs, the latter including some lovely specimens of the florists' art, for which the firm are justly proud. A similar compliment was paid Mr. S. W. Seagraves for Cactus Dahlias; and to Mr. Parkes, of Whittington Hall Gardens, Chesterfield, for a new Melon called "A.R.," which the judges described as "A very good Melon of capital flavour."—R.

As bearing out the remarks by our own correspondent in the above report, we quote from the "Sheffield Daily Independent" the following: "In one respect the society obtains nothing like



the measure of support it merits. The public bodies of the town, to say nothing of large numbers of wealthy citizens figure neither in the subscription list nor amongst honorary exhibitors. Were the Parks Committee of the Corporation and the Town Trustees—to give only two instances—to arrange for the display of some choicer specimens of flowers from the parks and Botanical Gardens, the show of the society would at once become more representative and attractive. At little inconvenience and expense such a scheme could be carried out, and Sheffield could boast of a flower show worthy of the name it bears." In order to help meet the monetary loss, the committee are proposing to have a sale of flowers.

### Dumfriesshire and Galloway, August 15th and 16th.

The show of this society, for the last two seasons under a new directorate, was the most successful it has held since 1862, and the speakers at the opening, and at the judges' luncheon, spoke hopefully of its prospects. This year the show was held on August 15 and 16, in a large marquee at Castledykes, Dumfries, which was filled with a splendid assortment of horticultural produce. The show was gracefully opened by Mrs. Glover, wife of the Provost of Dumfries, who was introduced by Sir James Crichton-Browne, who made an eloquent speech. The premier position was taken by Mr. J. M. Stewart, Mollance, Castle Douglas, N.B., who won the Dumfries Burgh Cup with a beautifully arranged table of plants, Messrs. J. Service and Sons, Maxwelltown, coming second with a fine table. The third went to Mr. J. Houston, Crichton Royal Institution, Dumfries, who had a number of well grown plants, but whose table suffered from flatness of arrangement.

Cut flowers were good for the season, though Dahlias were but poorly represented. Sweet Peas were the flowers of the show, and were beautifully shown by several competitors. Roses were fine, Messrs. D. and W. Croll, Dundee, beating Messrs. Palmer and Son, of Annan, by only a few points, their blooms being larger, though hardly so fresh. The same firm also won easily for eighteen Teas over Mr. Houston.

Hardy flowers were finely shown, and the competition for table decorations was keen, the first and second prizes eventually falling to sisters, the Misses Rutherford, Crichton House, with beautifully arranged tables.

Vegetables were good, and the fruit classes were well contested. Mr. J. M. Stewart's Grapes were splendid, especially the Black Hamburgs, though another first-class fruit grower, Mr. Jas. Duff, Threave, Castle Douglas, ran him closely. There was a large turnout of non-competitive exhibits, Roses being capitally shown by Smith and Son, of Stranraer, and Palmer and Son, of Annan. Thomas Kennedy and Co., Fotheringham and King, James Kennedy and James Service and Sons, all of Dumfries, showed capital plants and flowers, and Mr. Pollock, Tarbolton, Ayrshire, showed examples of his rustic structures for the garden. The services of Mr. R. G. Mann, "Courier" office, Dumfries, the able secretary, are beyond all praise.—A.

### Ipswich Mutual Improvement.

On Saturday, the 16th inst., some seventy or eighty members of the above society had a very enjoyable excursion to Felixstowe. A pleasant stroll along the beach brought the party to The Lodge gardens, where they were met by Mr. Felix Cobbold, who not only permitted the party to view his beautiful grounds, but likewise generously entertained them to tea, this being the first item on the programme. After tea Mr. R. C. Notcutt, as president of the association, expressed the thanks of the party to Mr. Cobbold for his hospitality, to which Mr. Cobbold suitably responded. A tour was then made of the gardens under the guidance of the head gardener, Mr. McIntosh. Although of but small extent, this garden is perhaps one of the most interesting on the east coast, being exceedingly rich in hardy plants. Situated on the top of the cliff, it is protected from the sea by a massive sea wall, while shelter from the wind is obtained by thick belts of shrubs. The face of the cliff is covered with rock-work, on which *Mesembryanthemums* are largely planted, forming large patches, flowering with the greatest freedom. Water trickles down the face of the cliff into a small pool, where the Cape Pond Weed (*Aponogeton distachyon*) is thoroughly at home. No formal bedding finds a place here, but large beds of Roses, herbaceous plants, annuals, &c., make telling masses of colour. One of the latest additions to the establishment is a new kitchen garden, enclosed by substantial walls, on which some young fruit trees were making satisfactory growth. Broad grass walks run round the outside and cross the garden, the centre walk being arched over its entire length, and planted with single cordon Apples. Although the trees have only been planted a year they are making a strong growth and carrying a heavy crop of fruit, giving promise of making a delightful feature of the place. The glass department is thoroughly organised and up to date, both fruit and plants receiving the best attention, reflecting the highest credit on the able gardener and his staff.—E. G.

## THE BEE-KEEPER.

### The Heather Season.

Most bee-keepers are not so favourably situated that they can obtain a harvest from the Heather without moving their bees a distance, and as this is always attended with some risk, a few hints will be of assistance. In the first place, there are numerous conditions which come into play in determining the duration of the Heather season, principally, of course, the quality of the bloom, but as the flow under any circumstances from this source is very short, it will be evident that only the strongest stocks will recoup the owner for the expense of removal. An examination and reduction of hives should, therefore, take place a short time before the journey is undertaken. All brood combs which are filled or partly filled with honey should be replaced with bars of brood from other colonies on the point of hatching. In fact, stocks should be in a precisely similar condition to that in the early part of the year.

To ensure safe transit, the brood combs should be fastened down by screwing a strip of wood, 2in wide, along the ends of the bars on both sides, so that they will not be able to swing and crush the bees. Supers can then be fixed above, and the bees allowed access to the whole tier. By allowing them plenty of room this precaution minimises the possibility of the internal heat of the hive rising to such an extent that there is danger of the combs collapsing and preventing bottom ventilation. It is advisable to place a sheet of cheese-cloth or open bagging over the top of the supers instead of a quilt to provide a current of air sufficient to keep the bees cool. Free bottom ventilation, however, is by far the most important. If the hives are fitted with bottom ventilators, allow them to remain open. If ventilation is obtained by the entrance, open full width and cover with perforated zinc, then tie the supers and hive together securely. Do not spare the rope. It is a mistake to disregard the importance of binding firmly. Laxity in this respect may result in finding, when opened, that one of the most promising hives is nothing but a mass of honey and suffocated bees.

When the distance is great, the method of conveyance should be by rail, but if the journey is short other means will have to be resorted to. There are few people who handle hives as they ought to do. This is where the greatest risk is incurred. Unless care is exercised to keep the bars level they will break and probably ruin the colony. To prevent such a catastrophe have plenty of assistance when loading and unloading, and whatever vehicle is used must have springs with a little play. If too hard, there is a danger of breakdowns when jolting. Should there be any doubt as to the pliability of the springs, pad all the hive legs with hay. This will lessen the vibration considerably. To avoid suffocation there should be at least two-thirds more space allowed than the bees actually occupy. Not otherwise can they be confidently packed. Any hives which cannot be so provided, and thoroughly ventilated, will be better left at home. The journey is better carried out at night when the air is cool. On arrival at destination, if the weather is unsettled, select the most sheltered position on the moor for the hives to stand. This affects the harvest to a great extent. When the weather is settled the position is immaterial.

There is one point which must be mentioned, and that is, that bees have a disagreeable manner of rushing out without marking the spot when excited by confinement. A judicious plan of obviating this is to open the hives at the extreme ends, then the middle one, and when these are settled the others may be released, always liberating those most distance from the flying bees. If all the hives were opened simultaneously, the bees would rush out all at once, and, on returning, probably to the wrong hive, fighting and confusion ensue.

There is a belief that any too much room in the supers is injurious, but if, at the end of July, young queens have been introduced, and the hives are in a normal breeding condition, a little extra room has no ill effect. However, the nights are often colder, and for rapid work it is essential that the heat should be concentrated as much as possible, and everything should be done to keep them warm and encourage work at night in preparation for the following day's honey flow. Seasons are so variable that definite rules cannot be followed. When the weather is exceptionally hot, the bee-keeper should endeavour to visit them frequently, in order to adjust ventilators, and give extra room as required. The honey flow may last a few days or weeks, but there is seldom anything of note after the middle of September.—E. E., Sandbach.



### Hardy Fruit Garden.

**APPLES AND PEARS.**—The season for gathering the early varieties is somewhat late this year, owing to the untoward weather experienced over a prolonged period, and it is doubtful whether even such early Apples as Irish Peach, Red Astrachan, American Mother, and Devonshire Quarrenden have yet ceased swelling, or reached the period when the fruits can be advantageously gathered and stored. Under the best conditions, however, these varieties do not keep long; hence, probably, the most economical method of utilising the fruit is to gather the most forward fruits daily as they become fit, storing only small quantities, until it is compulsory to gather the whole crop. This irregularity in ripening has advantages. There is less strain upon the trees, and the season for the different varieties is prolonged. Early Pears, no less than Apples, are late in maturing, and many fruits are yet hard and green. It is useless to gather any in this condition, as they would not ripen if stored. When, however, the outer skin commences to turn yellow, and the fruits, on lifting carefully to a horizontal position, become readily detached from the spurs, it is then advisable to gather, store, and there finish. When they hang to fully ripen on the trees, the fruits are mealy. The varieties likely to be ready for gathering now are Williams' Bon Chrétien, Citron des Carmes, Summer Doyenné, Jargonelle, and Clapp's Favourite.

**PLUMS AND CHERRIES.**—Heavily-cropped Plum trees will require the branches supporting, for as the fruit gains in size the weight in the aggregate increases, and a strain is laid upon the branches. Some of the early varieties of Plums will have fruits forward enough to be gathered. In doing this the fruits are secured in good condition and the trees relieved. Also remove small and deformed fruits, and give a final thinning to the latest varieties of Plums. These have still several weeks to swell and mature. Water and liquid manure may be given these trees with good effect; also remove superfluous wood, and expose the fruit to light and air. The season for Cherries does not as a rule extend beyond the present month. Gather all dessert varieties as soon as ripe. Morello Cherries will hang for a considerable time after ripening, if protected by nets from birds. The fruit grown on walls is best for this purpose. Fruit is borne the most freely on young wood; hence it is desirable to secure as much as possible, but, without crowding, laying it into the wall now in a temporary way. After the season's crop has been gathered, the bearing shoots may be cut out.

**OUTDOOR PEACHES AND NECTARINES.**—Every encouragement should be afforded trees on walls to thoroughly ripen and perfect the fruit. This can be done by systematic treatment in regulating the growth, laying all the most suitable growths of this year's production which are of medium strength against the wall or trellis. These will be ready to take the place of the discarded shoots which are cut out after the fruit is gathered. The fruits should be removed from the trees before they are fully ripe. They lose nothing in flavour by being finished in the fruit room. The fruits, however, often fall prematurely, and to save them from undue bruising it is desirable to suspend nets below them. After fruit is gathered, the trees may receive a thorough washing with the syringe or garden engine, red spider frequently gaining a footing to a greater or lesser extent during the time the fruit is ripening.

**CLEANING STRAWBERRY BEDS.**—At the end of the Strawberry season beds which have borne fruit freely are apt to be neglected, masses of runners and weeds choking the legitimate plants. This superfluous material ought to be cleared away as soon as possible, reserving any good plants or well-rooted runners so long as it is certain they have originated from fruitful varieties. These may be planted to form new beds at once, or reserved in nursery quarters for later planting, especially if the ground is not ready for their reception. It is important that sturdy plants with bold crowns and healthy foliage only should be employed. In clearing a Strawberry bed, detach the runner wires close to the parent plant. Then the intervening space can be hoed or the useless runners and weeds pared off with a spade.

**PREPARING GROUND FOR STRAWBERRY BEDS.**—As the main lot of new Strawberry beds are usually planted in the course of the next few weeks, the ground ought to be prepared without delay. Nothing short of deep digging and generous manuring, should the ground be poor, ought to be adopted for Strawberries. The best results will in time follow bastard trenching, which consists in moving the soil two or three spits deep,

but not altering the position of the several layers, or burying the top good material, and bringing hungry subsoil to the surface. The manure used ought to be well decomposed, and incorporated with the soil in the course of breaking it up. Ground may be available for Strawberries which has recently in spring been generously treated in respect of manuring and mechanical preparation. This is really better adapted for planting if rich enough, because it has had time to become consolidated. Strawberries like firm, rich ground.—EAST KENT.

### Fruit Forcing.

**VINES.—EARLY FORCED IN POTS.**—The canes intended for starting at the beginning of November must be strong, short-jointed, brown and hard in the wood, with rounded, plump, well-formed buds. Although the leaves may not be off, the Vines will now be at rest, for when the wood is properly ripened, and water not supplied oftener than is necessary to keep the soil from becoming dust dry, and the house or place where they are kept is cool and dry, there is no danger of starting the cane buds, even when the laterals are closely pruned and the shortening effected to about 6ft. more or less, according to the situation of the most promising buds on thoroughly sound wood. The principal leaves will still possess some elaborating power, and the nutriment assimilated be stored in the wood and buds. This makes all the difference between Vines starting strongly and weakly when subjected to the requisite heat and moisture. Vines that mature with clean healthy foliage are the only ones giving satisfactory results when early forced, but this is dependant on their being stored with concentrated nutrition for utilisation in the early stages of their growth under forcing treatment. When the Vines have to be bought, orders should now be placed, or even the canes selected and marked for delivery at an early date. All points considered, there are no varieties equal to Black Hamburgs and Foster's Seedling for early forcing. White Frontignan forces splendidly, but the clusters and berries are too small for marketing. Madresfield Court is one of the best for early work, and when well done commands good prices by its taking appearance and high quality.

**EARLIEST FORCED PLANTED-OUT VINES.**—There is seldom any question as to the ripeness of the wood in the case of early forced Vines. It is different with those not previously subjected to early forcing, but these intended for starting in November or early in December should now have the wood ripe and some foliage, perhaps, falling; but there must not be any attempt at removing it; nor to cut the laterals close in, or that may cause the principal buds to start, therefore remove the laterals by degrees, and shorten some of the long shoots, preserving, however, some growth, especially when the basal leaves are down, the final pruning being deferred until the early part of the next month. In the case of such Vines it is desirable to remove the old surface soil down to the roots and go amongst them with a fork, taking this advantage to raise any that are deep, laying them in fresh material nearer the surface. Good calcareous loam of the red sandstone formation is the most suitable, with an admixture of crushed bones and other opening and enriching substances. If the soil be light, add a sixth of clayey marl dried and powdered, or, if stiff, a similar proportion of calcareous gravel or old mortar rubbish. The thing is to secure a healthy rooting medium, such as will induce fibrous root formation, and keep the roots in a healthy state. This can only be effected with sound materials and thorough drainage. Give a moderate watering, and the roots will push from near the collar into the soil at once, thus the Vines will be in capital condition for starting when the time comes round. When lifting or renovating the border is deferred until the leaves fall, the starting of the Vines is not nearly so satisfactory.

**MIDSEASON HOUSES.**—Midseason Vines delight in a good spread of foliage, every principal leaf having full exposure to light and air, and with these formed under well ventilated conditions, the wood is then stout and short jointed, the leaves thick and leathery, deep green in colour, and the Grapes well nourished, colouring and finishing well, while the wood ripens kindly, being brown and hard, and the buds plump and promising for next season's work and cropping. Copious supplies of water and top-dressings of fertilisers are necessary for the perfecting of the current crop. Mulching light soils materially aids results where water is scarce. Even sewage water may be requisitioned on some places with advantage, but this must not be overdone, for an over-strong dose of fertiliser or liquid manure and needless waterings are the precursors of shanking, which in this, as in most seasons, has been no sinecure as regards giving employment to scissors in removing shanked berries. Sustaining rather than stimulating food is desirable for Vines ripening their crops. Moderate nitrogen supplies aid the Vines immensely in the late stages of the Grapes swelling, but that from blood and bone manure and good all-round fertilisers containing potash, magnesia, and iron is



better than quickly acting nitrates. Fire heat is often necessary to ripen midseason Grapes perfectly, but with ventilation day and night, to ensure a circulation of air, it may often be dispensed with in bright weather. The nights, however, are now getting cold, and fire heat may be necessary, though a good rest at night aids Vines wonderfully that are carrying heavy crops of Grapes. Enough fire heat should be given to maintain the temperature at 60deg to 65deg at night, and 70deg to 75deg by day, allowing 5deg more for Muscats and similar varieties.

**LATE HOUSES.**—The Grapes will now be at the colouring stage or near thereto, and should be given every encouragement. Afford full supplies of water, though a good surface mulching, sweetened horse droppings, or stable litter free from the straw and thrown in a heap, and when hot, turned inside to outside, and top to bottom, answering well when not more than a couple of inches thick, continuing the supplies of nourishment until the Grapes are well advanced in colour, for most late Grapes take a long time to perfect thoroughly, and some are not so up to the shank, even when apparently finished, which is often a consequence of too early stopping the supplies of nutrition, and in some cases the consequences of too short supplies of food and moisture are manifest in the Grapes shrinking, as not unfrequently occurs with Muscats, and in the doings of the Vines the following season. All late Grapes require time, and all ought now to be colouring, or close on, while no harm will come to those advanced therein as regards keeping afterwards. In order to effect perfection of berry in size and finish, a fair amount of air moisture with a circulation of air constantly is imperative, diminishing the air moisture as the Grapes advance in colouring. Poverty of finish is the chief cause of Grapes shrivelling, cracking resulting of a close atmosphere, following a period of drought or ventilating injudiciously. Afford a temperature of 70deg to 75deg by day, 80deg to 90deg with sun, and close sufficiently early to increase to 90deg or 95deg. When the sun is losing power, put on enough top and bottom ventilation to insure the circulation of air, allow the temperature to gradually cool, which rests the Vines, and increase the ventilation early with the advancing temperature. The hot water pipes should, if necessary, have a little warmth in them to prevent the temperature falling below 65deg at night.—**ST. ALBANS.**

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.            | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|                  |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                  |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.<br>August. |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ...10     | W.N.W.             | deg. 59.9               | deg. 54.7 | deg. 64.7 | deg. 49.2 | Ins. 0.06   | deg. 60.0                             | deg. 60.0      | deg. 57.9      | deg. 40.2                    |
| Monday ...11     | N.W.               | 55.4                    | 50.0      | 61.5      | 44.8      | 0.03        | 58.4                                  | 59.6           | 58.0           | 35.7                         |
| Tuesday ...12    | W.N.W.             | 57.4                    | 54.2      | 65.0      | 47.4      | —           | 59.0                                  | 59.3           | 57.8           | 37.7                         |
| Wed'sday 13      | W.N.W.             | 57.4                    | 54.6      | 65.2      | 46.8      | 0.04        | 58.9                                  | 59.2           | 57.8           | 40.0                         |
| Thursday 14      | W.N.W.             | 64.8                    | 60.4      | 69.4      | 54.0      | —           | 60.3                                  | 59.1           | 57.7           | 46.0                         |
| Friday ...15     | S.E.               | 64.0                    | 60.0      | 70.3      | 58.7      | —           | 61.8                                  | 59.5           | 57.6           | 52.8                         |
| Saturday 16      | S.E.               | 60.6                    | 57.3      | 77.5      | 49.6      | 0.05        | 61.9                                  | 60.0           | 57.6           | 42.0                         |
| MEANS ...        |                    | 59.9                    | 55.9      | 67.7      | 50.1      | Total. 0.18 | 60.0                                  | 59.7           | 57.8           | 42.1                         |

The week for the most part has been dull with occasional showers; Saturday was an exception, being bright, and warmer than it has been since July 15.

### Trade Notes.

#### Bulbs for the London Parks.

From Mr. W. J. Towner, of H.M. Office of Works, Westminster, S.W., Messrs. Cutbush and Son, have received the following letter:—"I am directed by the First Commissioner of His Majesty's Works, &c., to accept your tender of the 21st inst. for the supply of bulbs for bedding purposes in the coming season to the Royal parks and gardens in the charge of this department."



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

### Plan of a Bethy—Competition.

"Well-wisher" promises a first prize of £3, and the Editor supplies a second prize of £1.

The rules of the competition are as follows:—The plan, drawn to scale, must not exceed 7in broad by 7in deep, and must be clearly defined on stout paper. The plan must provide suitable accommodation for six men, and the cost of the building ought not to exceed £200 to £220. A statement of the general items of cost should accompany the plans, together with any written comments thereon. The competition is open until Christmas, 1902, by which date all plans must be in the hands of the Editor. The sender's name and full address should be enclosed when sending the plan, and the sender will alone be held responsible for it.

**FREE-FLOWERING FUCHSIAS FOR BEDDING** ("Kittie," Dorset).—Of dark varieties the old favourite, Dunrobin Castle, with small dark foliage, producing an innumerable quantity of small coral-red flowers, and, when trained into a standard, makes a lovely feature in floral displays, is perhaps the most distinct bedding variety. Others are Abundance, Duke of Edinburgh, Eureka, Gaiety, Scarcity (weeping habit), Lye's Rival, Charming (dwarf), Wave of Life (golden-coloured-leaved dwarf), Mr. King, and General Roberts (drooping habit). Light: Eynsford Gem, Princess May, Beauty of Trowbridge, Covent Garden White, Minnie Banks, Duchess of Albany, Annie (drooping habit), Rose of Castile Improved (strong habit), and Prince Alfred (strong grower). The hardy varieties: Corallina syn. Exoniensis (good for covering walls and best for open gardens, richly covered in foliage and flower), Globosa (a good old variety, and one of the best hardy kinds), Riccartoni (a beautiful variety, and hardiest of all the outdoor Fuchsias), is severally well worth attention. Of variegated Fuchsias for bedding, Meteor, the lower leaves buff-yellow, the upper ones rich crimson, is, perhaps, most used; but Sunray is by far the best, with red variegated leaves, quite ornamental and beautiful.

**APPLE SPRAYS DISEASED** (X. Z., Sussex).—The young shoots and leaves are affected by the Apple mildew (*Sphaerotheca mali*), which causes them to become white, owing to the powdery white coating of conidia or summer spores, and they ultimately become brown. The mycelium of the fungus is perennial, and the tissues, growing along with the shoots each season, stunting its growth, and eventually greatly injuring or even killing the tree. The mycelium, however, does not extend backward in the branch from the point of infection; therefore, persistent removal of the diseased shoots and burning them soon exterminate the disease, especially if combined with spraying in spring, as detailed for preventing scab, with which the fruit and some of the leaves and shoots are also infested, under "Pears Diseased."

**PEARS DISEASED** (Idem).—The fruits, leaves, and young growths of Louise Bonne of Jersey Pear are affected by the Pear scale (*Fusicladium pirinum*), a parasitic fungus closely resembling in structure and habit Apple scale (*Fusicladium dendriticum*). It attacks the leaves and young shoots, as well as the fruit, first appearing on the leaves in the form of small, roundish dark spots, mostly on the upper surface. These spots soon increase in size and run into each other, forming large irregular-shaped blackish blotches, and when conditions are favourable, such as a cool, damp season, the leaves are frequently killed while quite young, the fruit is retarded in growth, shrunk, and frequently cracked and spoiled by the attacks of the fungus. There is no remedy, but the disease may be prevented by spraying with dilute Bordeaux mixture (loz copper sulphate and loz of freshly burned or quicklime, to one gallon of water), for ordinary-strength Bordeaux mixture is apt to scorch the foliage, especially when young; hence it is advisable to use the dilute form. Spray, first, just as the flower-buds begin to open; second, when the petals of the flowers are falling; and then when the fruit is the size of horse beans or slightly larger. If the season be rainy, a fourth treatment should be given twelve days after the third.

**CLEMATIS JACKMANI GROWTHS DYING OFF** (Wyvern, Twickenham).—The cause of Clematis growths dying off has not been satisfactorily explained, but it usually occurs on recently planted-cut plants, and probably arises from their being planted too deeply, or deeper than they were before, thus affecting the portion of buried stem prejudicially, softening and destroying the stem, though this is usually effected by a fungus, *Pleospora herbarum* var. *Alternariae*, seldom, if ever, observed in plants of quite a healthy appearance, but it undoubtedly exerts its influence some time before it is externally visible. In this period the Clematis tissues become penetrated by the colourless, branched mycelium of the fungus. On this mycelium, near and on the surface of the plant, are formed the conidia, succeeded by the pycnidia and the perithecia conditions. The affected growths become yellowish green, then pale brown, and alternately black, the collapse being from the top, and gradually dwindling away. The best preventive of this is not to plant deeper than the plants have been before, and sprinkle on the ground about the plant air-slaked lime liberally, as well as adding to the soil before planting a dressing of 2lb air-slaked lime per square yard, and mixing well with the soil a spit deep. As young growths spring up from the root it is certain the disease is a stem affection, hence we have found it good practice to remove the soil from about the stems down to where they spring from the rootstock, and leave them bare until they become thoroughly hardened, and, when this is effected, replace the soil.

**HOW TO MAKE MUSHROOM SPAWN IN BRICKS** (J. E. K., Carlisle).—Cultivators of Mushrooms sometimes prepare their own brick spawn, but only a very few as compared with those who purchase it. One of the modes of preparation is briefly as follows: Fresh horse droppings are collected and mixed with fresh cow dung in equal proportions, adding a little adhesive leam to hold the other constituents together. The whole is mixed with liquid stable manure until as soft as mortar, when it is spread on the floor of an open shed until sufficiently dried to form into bricks of 9in long, 6in wide, and 2in deep, there being sixteen of these to the bushel. These should be set on edge, turned frequently, and allowed to get about half-dry. Then a hole is made about 2in from the end of each brick in one side, about an inch square and deep, and filled with a piece of good spawn, enclosing it with a little of a similar substance, the spawn being inserted so deep as to be a little below the surface of the brick. Prepare a bed of fresh, but sweetened, horse dung, about 9in thick, on a dry bottom, and build the bricks in a pile above it, allowing a space between each two, and cover with litter, so as to retain a temperature underneath of 60deg, above which the heat should not rise, and if likely to do so the covering must be reduced accordingly. Under such conditions, the spawn will spread itself throughout the whole of each brick, and the latter must be frequently examined and removed when they are permeated by a white cloudy substance, not so far advanced as to show minute threads. When removed from the hotbed, the drying process should be completed thoroughly, and the bricks stored in a cool, dry place, to arrest any further development of the spawn, until required for use.

**BUNCH OF GRAPES WITH DISEASED BERRIES** (Nemo, North Wales).—The berries are affected by what is known as spot, which first appears as a small, irregular whitish mark on the side of the berry, as if it had been bruised in some way; the pulp dries up, and a sort of contraction occurs, the berry soon assuming a one-sided irregular form. It is caused by the fungus named *Gloeosporium fructigenum* var. *laticolor*, and may be prevented by spraying with ammoniacal solution of copper carbonate, made by forming 1oz of copper carbonate into a thin paste by adding six fluid ounces of water, then pouring on slowly twelve fluid ounces of aqua ammonia, 26deg strength, and, when dissolved, add nine gallons of water, when a clear deep blue solution is obtained. It is also effective against mildew, distributing in the finest possible spray, and so as to coat the foliage and fruit with the finest possible film; and, to be effective, must be applied in advance, of attack. The berries are also affected with scalding, and both this and spot are prevented by careful attention to the ventilation, spot being induced by having the house very close and moist, and then, suddenly, on some bright morning, admitting the external cold air too freely and too abundantly. Albeit, it is the closeness and moisture that has done the mischief, by the moisture condensed on the berries, weakening the cuticle and accelerating the germination and entrance of the fungoid growths. As the berries are worst affected on the north side of the house, we consider the spot and also the scalding arises through late or imperfect ventilation on some bright sunny morning, whilst the internal atmosphere, and even the berries, are saturated with moisture. We do not consider you will gain anything by removing the Vines on the north side of the house and replacing by new ones, unless the roots or border is not satisfactory. Give more air, and earlier, even a little at night, and maintain a gentle warmth in the hot-water pipes, so as to promote a circulation of air; then, we consider, all would be well, other conditions being favourable.

**COVENT GARDEN AGENT (P. W. N.).**—We have placed your communication in the hands of an agent.

**UNITED STATES' GARDENING PAPERS** (Thos. Field).—The horticultural journals of the United States known to us are mainly devoted to the commercial side of gardening. "American Gardening," however, is a journal for the private and amateur gardeners. The address of it is 136, Liberty Street, New York City; five cents per copy, or two dollars yearly to Europe. "The American Florist" is published from 324, Dearborn Street, Chicago, by the American Florist Company. Subscription: two dollars per year to Europe, "The Florists' Exchange" (two dollars to Europe per annum) comes from 2, 4, 6, and 8, Duane Street, New York City. There are others of less importance also published.

**NAMES OF PLANTS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (A. J. M.).—The blue papery-like flower is *Statice profusa*. Send the Fuchsias to some large trade grower; we cannot name them. (R. B.).—1. *Veronica longifolia incarnata*; 2. *Campanula persicifolia alba*; 3. *C. elegans*; 4. *C. latifolia*. (J. B.).—1. *Veronica longifolia subsessilis*; 2. *Rhapiolepis japonica*; 3. *Tradescantia virginiana* var.; 4. *Limnanthes Douglasi*; 5. *Hordeum murinum*, the Wall Barley. (J. G.).—1. Scotch Rose, *Rosa spinosissima*. (Alf.).—1. *Galega officinalis*; 2. *Pratia angulata*; 3. *Strobilanthes Dyerianus*; 4. *Miscanthus japonicus zebrinus*; 5. *Eulalia japonica*; 6. *Codiaeum* (Croton) *Johannis*. (W. D.).—1. Tway-blade, *Listera ovata*; 2. *Ballota nigra*; 3. *Solanum dulcamara*; 4. *Solanum nigrum*, the fruits turn black; 5. *Crépis virens*; 6. *Sonchus oleraceus*. (F.).—1. *Lychnis coronaria*; 2. *Eryngium Obverianum*; 3. *E. giganteum*; 4. *Phlomis viscosa*. (A. M., Strilingshire).—They are varieties of *Begonia semperflorens*. (F. T.).—The species *Negundo aceroides*.

### Trade Catalogues Received.

W. Baylor Hartland, Cork.—*Daffodils and Tulips*.  
William Clibran & Son, Oldfield Nurseries, Altrincham.—*Bulbs*.  
Cooper, Taber & Co., Ltd., Seed Merchants, 90 and 92, Southwark Street, London, S.E.—*Wholesale Bulb Catalogue*.  
William Cutbush & Son, Highgate Nurseries, London, N.—1, *Bulbs, Plants for forcing*; 2. *Carnations*; 3. *Strawberry List*.  
Dickson & Robinson, Manchester.—*Bulbs and Roses*.  
Dicksons', 1, Waterloo Place, Edinburgh.—*Flower Roots*.  
H. P. Kelsay, Boston, Mass., U.S.A.—*American Plants and Bulbs*.  
Wm. Paul & Son, Waltham Cross, Herts.—*Bulbs, Camellias, Shrubs for forcing, &c.*  
J. R. Pearson & Sons, Chilwell Nurseries, Lowdham, Notts.—*Bulbs and Garden Requisites*.  
John Peed & Son, West Norwood, London, S.E.—*Bulbs*.  
L. Späth, Baumschule, Baumshulenweg, Berlin.—*Bulbs*.  
L. Späe-Vandermeulen, Exotic Nursery, 92, Boulevard de Jardin Zoologique, Ghent, Belgium.—*Palms and other Foliage Plants*.  
Toogood & Sons, Southampton.—*Bulbs*.  
Vilmorin, Andrieux & Co., 4, Quai de la Mégisserie, Paris.—*Bulbs and Strawberries*.  
Webb & Sons, Wordsley, Stourbridge.—*Bulbs*.



### Seasonable Notes.

So Professor Wrightson heads his interesting weekly paper in the "Agricultural Gazette," and he manages in these papers to touch on much useful matter. We would follow in his steps, but far behind. A friend, a farmer of long standing, is troubling himself sadly on the subject of parasites; he thinks during a long tenancy they may despoil a man of thousands. There have always been parasites; it is part of the primeval curse. Farming would be too easy without these drawbacks. We read of the locust, the caterpillar, the canker worm, the palmer worm, the moth, the lice, and grasshopper. These were the plagues that devastated the crops of the Chosen People. We think now we can add much to the list. Possibly they existed then, but through want of knowledge they were not detected. Wheat, Mangold, and wireworm. What is the cause of such an outcry this season? The wireworm appears to be more to the fore than ever. We see one reason suggested, and it sounds to us a reasonable one. As things are now, the Wheat crop



has decreased in value, as the value of forage or grazing crops have increased. Seeds are dear, and sometimes are a bit shy at growing; but when they do grow their value to the stock farmer is difficult to get at. In consequence of this it has become the practice to let them stand for an extra year, and it is always found when old pasture (and really in some cases the seeds amount to this) is ploughed up, the Wheat crop later is likely to be subjected to the attack of the wireworm. It really comes to this, whether it is better to save your seed bill and labour and secure an extra year's feed, or plough early with the assurance of a Wheat crop. Of course, here the farmer must be his own judge. It used to be the rule to get all seeds ploughed up by August ready for the new Wheat crop; but year by year sees a retrograde movement here. For one thing, as sheep breeding is profitable, the farmer has in view the value to his stock of a good run on old seeds, hence the delay in ploughing up.

Whether wireworm will attack and destroy Mangolds is sometimes a disputed point. The Mangold has many foes. We hear a good deal this season of the eelworm in Oats, for Tulip-like bulbs are forming, and the worm can easily be seen under the microscope. There seems to be no method of cure, only suggested methods of prevention. The insect is so completely shielded in the body of its host that it cannot be got at. Miss Ormerod suggests deep cultivation, rich manuring, and rotation of crops. Now, in a case we know, all these suggestions had been carried out to the very letter, and yet the crop is half destroyed. Professor Wrightson is of opinion cold, wet weather has much to answer for in respect of this plague. The Wheat eelworm is also injurious in cold, wet summers. Unlike the Oat pest, in Wheat it is the ear that is attacked, rather than the stem near the root. Cold nights are much to blame for the prevalence of insect life, that is, injurious insect life, and we really think this summer has seen as many cold nights as that of 1879. That year we began to lead Wheat September 29, and this year in mid-August there seems at present to be little prospect of ripe corn.

If we corn farmers suffer from parasite, what of the poor Hop growers? They seem to spend all their energy and capital in combating aphids and mould. We cannot read one report that is really very favourable, and the acreage is diminished, too, this year. It is said to be the worst attack of aphids that has occurred since 1882. It appears to us with the Hop crop there are far more bad seasons than good. Sir Wilfrid Laurier declares that before long Canada will not only be the granary of Great Britain, but also of the whole of Europe. Is it possible, too, that in the near future we shall depend entirely for our Hop supply from the foreigner? Perhaps in a new country, and under different climatic conditions, a good crop may be more easily obtained. No doubt this year's crop is that of hay. Everywhere the promise of an abundant yield has been fulfilled, and most of it has been got under favourable conditions.

We have before us the report of British farm crops as estimated by the "Times" as they stand now in the fields. The review of the situation as a whole is most favourable. Taking 100 as denoting a full average of healthy quantity, we find the grass crop put down as 102. That is something certainly unusual, for during the last ten years the grass crop has been weak. Wheat, Barley, and Oats are put 96, with a trifling difference in the decimal; roots follow at 95.1. Beans are suffering from a small aphid (parasites again) which has materially lessened the yield, and the weather, too, has been favourable for the production of filth among Peas. Of Hops we have spoken before; "deplorable" is the term applied to their condition by the "Times." Potatoes, too, show signs of disease; and we fear no amount of spraying will check the ravages. We are not quite sure that we absolutely regret disease in Potatoes. It seems a dreadful thing to say, but most growers will allow that in a disease year they make more per acre than when, as last year, there was a plethora. Potatoes, to use a vulgar expression, are "all muck or money," a most speculative crop, save on some of the red lands, where Potato growing always means a very good return. Red land Potatoes "use" so well, and, after all, that is the greatest test of all.

We derive great comfort from the excellent reports of the root crop, i.e., Turnips, Swedes, and Mangolds, throughout the kingdom. Every spring the agricultural papers discuss the question as to whether growing roots is altogether justified by results. It is an expensive business, and the crops by no means a certainty. There are so many difficulties to contend with; unsuitable weather (not only

drought, but ungenial temperature), the ordinary Turnip fly, and sometimes the dreaded diamond back. If the season should turn out wrong, then there is great jubilation among the advocates of forage and root crops; but if the season be as the present, and the prospects continue still favourable, the voice of the malcontents is silenced. For our part we know what terrible destitution we suffer with a "shortage" in the root crop, and we are only too thankful when we look round and see first the good supply of hay (well got), the plentiful pastures, and the regular, even rows of roots. With straw in abundance, this promises, at any rate, to be a good comfortable winter for stock.

We are wondering now how our lambs will weather the next few weeks, and we are also making preparations for the lamb crop of 1903. Some ram sales are over, and although the prices are better a trifle than last year, we do not see the recovery we should like. Ram breeding is an expensive pursuit, calling forth much skill, much patience, and a long purse. We depend on "abroad" for our best customers, and as the South American ports are still closed against our sheep, we fare but badly. We saw the other day that the King was offered a selection from some foreign herd of cattle (some remote district of which the name has slipped our memory), and he, in common with his humblest subject, had to decline, on account of the strict regulations against the importation of live stock. It is a wise rule, and does much to keep home animals free from disease. It is only those who remember in past years the terrible ravages that disease (often imported) has made among us who fully appreciate the desirability of keeping a stringent barrier between ourselves and the cattle of our neighbour.

### Work on the Home Farm.

Passing the village smithy to-day we noticed two reapers about to undergo repairs. Their ancient appearance invited a closer inspection, and a remark to the blacksmith elicited the information that they had been out of use for three or four seasons, and the repairs were likely to be expensive, that the owner had self-binders on his premises, but fearing that the crops would be too heavy for them, was having his old harvesters got ready for any emergency. We fancy that the old self-raker was little more effective than a binder amongst badly laid corn, and when the binder will not work we should prefer to fall back on an old manual delivery machine or the scythe.

We have had very little sun during the past week, and the nights have been cold. The crops have ripened very little, and it must be a September harvest. Such being the case, will farmers be wise to twitch their grain crops tightly with string? It will be very inconvenient to put our string binders away and revert to the old method, but we have some fine crops, and it will be a thousand pities if they are wasted for a matter of 4s. or 5s. per acre. String binding and stooking cost 5s. 6d. per acre at least, without counting horse labour and driving, which would amount to another 2s. 6d. If arrangements are made at once, men can be found to mow and tie up anything which is not really heavily laid, at 12s. per acre. Only experienced farmers can fully appreciate the difference between mown and string bound sheaves when it comes to the stacking process. In Norfolk and Suffolk, where the farmers have always made the most strenuous efforts to get their fine Barley in good condition, it is not considered policy to tie it up at all. We may use the binder for Wheat, but not for Barley or Oats. Whether the weather has been too cold or too wet, certainly Potatoes are not fulfilling their early promise. They do not fill the rows so well as they did. There are no signs of disease here, though they are reported from elsewhere.

Field Cabbage for next summer's use should be sown at once. If an acre of ground can be spared, 4lb of seed will be required, and should produce 100,000 plants sufficient planted out for eight acres. There is still no better kind than Enfield Market if you get a good stock. Drumhead is good for later use, and is a heavy cropper.

### German Sugar Industry.

Last year the Germans produced 1,500,000 tons of raw sugar, representing 13 per cent. of the best root crushed, which was an increase since 1840 from 8,000 tons of product as 5½ per cent. of the material used. The dyeing industry earned \$30,000,000 last year, against \$6,000,000 in 1874, notwithstanding diminished prices and increased wages. Artificial indigo now employs over 6,000 men, including 148 scientific chemists, although started only about thirty-five years ago with less than forty men. In 1898 Germany employed 14,000 persons in making scientific instruments, the exports being three times those of 1888.

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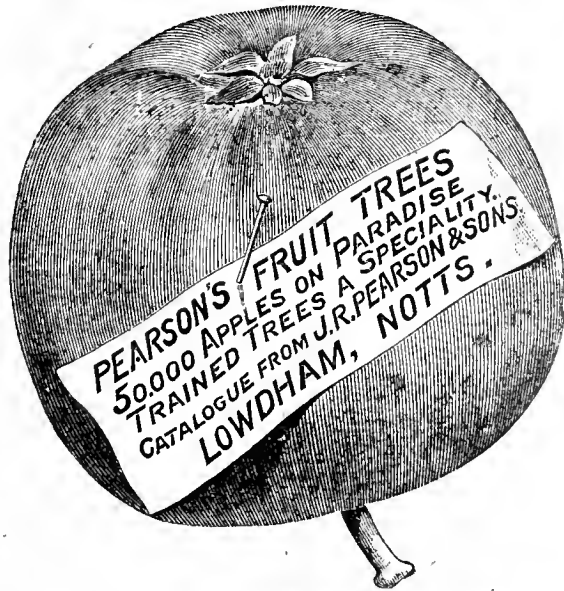
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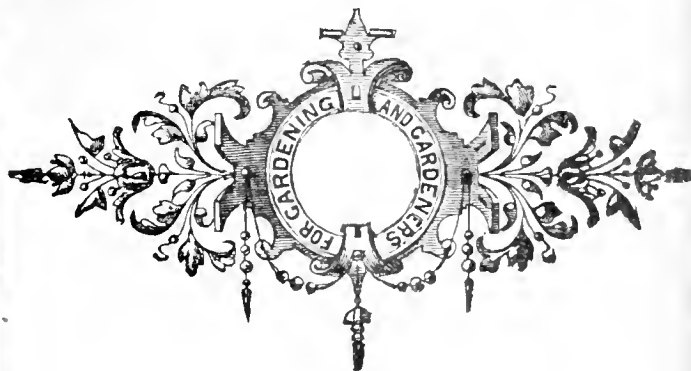
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## Journal of Horticulture.

THURSDAY, AUGUST 23, 1902.

### Autumn.

**T**EMPUS edax rerum—Time the devourer of all things. So runs the old motto on an ancient dial. In the hurry and rush of to-day there is little regard for such things. Perhaps it is better so, for to contemplate what has been "Since yonder spheres sublime, pealed their first notes to sound the march of time," seems "Teasing one out of thought as doth eternity." The present, not the past, is our concern; yet, even now, the insatiable maw, "As if increase of appetite had grown by what it fed on," appears to have suddenly absorbed this, our summer of 1892, and it has gone! Gone! Is it premature to judge it? To summarise a summer which, to say the least, has been peculiar. So far as dates are concerned, summer is, of course, still with us; but those who live in close communion with Nature are not much concerned about dates, unless it be one fixed for a flower show which altereth not, and, as worried exhibitors, come in conflict with the Old Dame by urging her on, or restricting her undue haste.

Gardening friends say they never knew a summer that has gone so quick, except some few of short memory, who assert there has been none. Being in agreement with the "gone so quick" section, it is noticeable that not one has a word in praise of the departed, although it is but fair to add that on the principle, possibly, *De mortuis nil nisi bonum*, they say nothing bad of it. Still, the fact remains that to all intents and purposes we are gliding into autumn. Autumn? Yes, so it seems to one who is first in the garden and the last out of it. The face of Nature's floral clock endorses the assumption. Lines of Montbretia are aglow; Asters wear autumnal livery in many hued buttons; dense cushiony

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heads of *Sedum spectabile* are filling up fast; when these put on the rosy purple, then, indeed, are the passing smiles of autumn at hand, and the all too brief Indian summer brings the glories of a dying year.

In looking back, Roses bloomed with a burst. The first week of July was pre-eminently a Rose week; one week of Roses, and the decline was rapid. Beds of Captain Hayward were superb, and H.T.'s behaved admirably. Now mildew is rife on most varieties, and Captain Hayward nearly loses his commission in our favour by being worst of the lot. What the hero of Rose week loses, however, is gained by Ulrich Brunner in its cleanliness and general good deportment; even where growing in proximity to the mildewed bad company has not corrupted its good manners. The last Rose of summer is still glorious on a many-arched trellis in the form of Crimson Rambler, and the great waggon-whip-like shoots, from 6ft to 10ft high of this year's growth, are as delightful to contemplate as they are to anticipate. Unfortunately there are breaks in the bloom on this trellis owing to some plants of *Aglaia*, the so-called Yellow Rambler, being interspersed. A rambler it is truly, yellow it may be if ever it flowers (has anyone flowered it satisfactorily?); but as for relationship with the Japanese beauty, it has no right, hence "Yellow Rambler" is a misnomer. Any variety of colour borne by legitimate children of Crimson Rambler would indeed be an acquisition.

Grateful is the gold of the large flowered Spanish Broom grown en masse, and how it enjoys the good soil the plants, as seedlings, were transferred to four years since! Never did we have finer clumps and lines of Sweet Peas (transplanted from pots), or a finer display than in mid-July; but the rainbow blaze was suddenly extinguished, in spite of a rigorous exclusion of all seed pods, and they are now flowerless, although there is a wealth of second crop buds breaking from top to bottom, showing that they will be good again. Yet the interval does not please.

Kitchen Peas—well, no need to complain. Some disappointment was felt over Pierremont Gem, a dwarf, and supposed early. However, it came in lately with a profusion of handsome pods well filled with peas of fine colour and flavour, so proves to be a grand midseason sort, ultra useful where stakes are scarce. French Beans have been long delayed; Coronation Day (the real one) gave the first picking of Ne Plus Ultra. Cabbages have kept clean and succulent, which brings to mind there has been no butterflies, and wasps are not yet in evidence, although there was no lack of queens earlier. Our neighbour's bees, too, were watched and waited for over the garden wall when Victoria Plums were in bloom. They came not, so a hair broom was brushed lightly over the blossom, and the set was abundant. Indeed, the only outdoor fruit that one can now regard with satisfaction. Yet Royal Sovereign Strawberries were exceedingly good, although a full fortnight late.

It is, perhaps, too early for comprehensive stocktaking, with its summing up of a season good, bad, or indifferent; but, as before remarked, it has been, to say the least, peculiar. A fine autumn, nevertheless, can do much to redeem that qualified character, and although it will not this year put Apples on our trees, it may garner up the hidden forces of nature for future benefit; and, possibly, it is with us gardeners as it often proves to be with other men who are often happier in anticipation than in possession. This season has certainly shown how little we can depend on orthodox lines or dates in gardening, but the delightful (?) uncertainty of the elements with the widely divergent circumstances of locality, puts men on their mettle—shows the vital necessity of keen observation, and enforces the fact that orthodoxy is the vampire of free thought and action.—A. N. OLDHEAD.

## A Young Gardener's Trip to South Africa.

(Concluded from page 173.)

On arriving at Durban five days after leaving Cape Town, our ship had to anchor outside the "bar," being too large to enter the harbour. As the storm came up, denoting a dangerous "bar," no tug was allowed to come out to us till late in the afternoon, when the exceedingly heavy swell had somewhat abated. We got on to sound footing all right, but not before getting rather a rough heave on "crossing the bar." About once in a lifetime such an experience is quite enough for any man. The delightfully mild climate was appreciated after the wintry weather we braved at Cape Town.

Winter at Durban appears to be as warm as any of our hottest summer days at home. My friend and I decided next morning after our arrival that we would visit the Botanic Gardens. We found Mr. Wyllie, who is an old Kewite, very willing to show us round. The Queen's Jubilee Conservatory is a magnificent building, and was furnished with Tree Ferns, Palms, *Adiantums* (splendid specimens), *Polypodiums*, and *Selaginellas* principally, all in surprisingly good order. A *Cocos plumosa* stood about 20ft high. This is the only house open to the public, but one large private house was filled with a fine batch of *Adiantums* of good varieties. Outside this house were hundreds of young plants of *Crotons*, *Aralia Veitchi*, and *Kentias* in small boxes. Out in the garden there were no lawns like those which we are accustomed with at home. Palm trees of many varieties are planted throughout the grounds and reach from 10ft to 30ft in height. A *Cocos Weddelliana*, 8ft high, looked grand, but we were informed that it required the warmest spot to stand their winter.

Huge plants of *Euphorbia* (*Poinsettia*) *pulcherrima* were a mass of flower, the bracts measuring from 12in to 15in from tip to tip, and I am sure this might be reached at a time at home should the too common system of coddling be given over. Very original was the edging of *Euphorbia splendens*, 9in high, along some of the walks. It is a pity that an edging such as this could not be resorted to for protecting some of our lawns and borders. Large trees of *Acacias*, 20ft to 30ft high, were just coming into flower; but standing out prominently was a magnificent tree of *Acacia spectabilis*, the lovely, silvery foliage of which would soon be hidden from view by the great amount of flowers just beginning to burst forth. Apart from this was a beautiful Silver Tree, 12ft high, standing amidst a strong undergrowth of *Asparagus plumosus nanus*. Then we came to the bed in which Mr. Wyllie sowed the first seeds of the *Asparagus* now known as *A. Sprengeri*, which he found on the Bluff, about two miles distant. Planted at different parts were beds of *Dracenas* of sorts we are acquainted with in our stoves.

Here and there were large plants of *Pandanus Veitchi*, and very odd, too, was *Ravenala Madagascarensis* or Travellers' Tree, from which flows water after a certain incision has been made, and probably many a thirsty traveller has been revived in this peculiar manner. Taking a walk over the Bluff, we found several plants of *Asparagus Sprengeri* and *A. tenuissimus* climbing up some plants of *Lantanas*, 8ft high, and growing wild. These few notes do but give a poor idea of the beauty of this, the finest Botanic Garden in South Africa, seen, as it was, even in the middle of their winter.

Adjoining the Botanic Gardens is Sir Benjamin Greenacre's grounds. The gardener, who is an Englishman, very kindly accompanied us round. Two houses are given over to Ferns, one of which is filled with large plants of *Adiantums*, of the best varieties, and *Gymnogrammas*, mostly. The other house is totally given over to *A. Farleyense*, or Ostrich Feather Fern, and although small plants, they are the finest I have yet beheld, the fronds being fresher and larger than is usually the case at home. A house, 40ft long, is devoted to rockery work, and planted with many varieties of Ferns and *Begonia Rex*. The roof of this house is completely covered with *Cissus discolor*. Orchids are difficult to work, but a small house is furnished with *Cattleyas*, and looked fairly well.

The grounds outside, however, were the eye-openers. Large beds of *Crotons*, beautifully coloured, and from 3ft to 6ft high, were a sight that once seen will not easily be forgotten. *Cannas* had been good but were almost past. *Bougainvillea glabra* and *B. Sanderiana*, used here as a climber, rendered a profusion of flower. Roses do fairly well, but the white ants play havoc at times.

An *Araucaria excelsa*, 60ft high, and a small tree of *Araucaria Cooki*, 12ft high, were the two outstanding features among the trees. Vegetables are difficult to grow in Durban, but the Oranges and Bananas, among fruits, are the finest flavoured I have tasted. A run through the outlying districts showed us acres after acres of Pineapples, Bananas, Oranges, and Lemons being grown for market, and principally for the export trade.—ALPHA.



### Stanhopea Amesiana.

Stanhopeas as named hereunder, will flourish if kept well up to the glass in a warm house in the summer, and they should be liberally watered both at the roots and on the foliage while growing. In the winter they may be removed to cooler and dryer quarters, which will rest the plants and tend to keep insects in check. The species most generally grown are *S. eburnea*, *Bucephalus*, *insignis*, *oculata*, *tigrina*, *Lowi*, and *Wardi*. All of these, with the exception of the first named, have flowers of various shades of yellow more or less spotted or blotched with purple or crimson, while the flowers of *S. eburnea* are wholly of pure white. The newer variety of *S. Lowi* named *Amesiana*, and which we illustrate, was first exhibited by Hugh Low and Co., of Bush Hill Park, Middlesex, in 1893. It is a native of Colombia (*S. America*), and flowers in summer. The blossoms are deliciously fragrant, porcelain white, the inside of the hypophyl suffused with rose."

### Dendrobiums:

#### Their Growth and Culture.

(Continued from page 169.)

The growths push in spring, and from then, onwards, must be encouraged. In autumn they must be thoroughly exposed to sun, air and light, while in winter a complete rest is necessary, the plants being kept almost absolutely dry at the roots—only sufficient moisture being given to prevent shrivelling—and in a cool airy and comparatively dry house. They should remain here until the flower buds show naturally unless wanted early in flower, when they may be given a little extra warmth, but without undue moisture. Kept thus to an annual cycle of growth and rest, they will usually be satisfactory for a number of years, except in the case of a few species difficult to cultivate, which will be noticed in due course.

The evergreen species are very similar in their requirements, but like a more regular temperature winter and summer, slightly more room in the pots, and sufficient moisture to keep the foliage in good order in winter. If room is short in the East Indian or Dendrobium house, these may be easily accommodated in the Cattleya house, or at least the majority of them.

The black and mixed group are usually found to be more difficult to grow for any length of time. For the first year or two after importation they thrive well enough, but usually after this they begin to go back, and when once this backward tendency has set in, nothing will stop it. It is true there are instances where these plants have gone on for many years and increased in vigour rather than declined, but they are in the minority, and I think I should be well within the mark in saying that out of a hundred plants imported, less than ten of them live ten years in this country.

Doubtless it is in the atmospheric treatment we are at fault with this section. Heat and moisture, light and air we can give them, but under a glass roof we cannot supply the ever-changing atmosphere of their native habitat, or discover what is the necessary constituent for their welfare. In a wild state a good many of these are doubtless deciduous, but many of them when introduced to cultivation take on almost an ever-

green habit, and it is wise to let them have their own way in this respect. None of them like a great body of compost, the roots preferring to cling to the rods of a basket, or a rough cork block rather than lie embedded under inches of peat and moss. All like abundant atmospheric moisture, and the species must be allotted their proper temperature as will be noted below, while thrips, their greatest insect enemy, must be rigidly kept down.—H. R. R.

### Hybrid Phaius in Belgian Leaf Mould.

Much has been written of leaf mould culture for all kinds of Orchids. The photo sent is one of our hybrid Phaius, writes A. Dimmock in "American Gardening," of which we now have some thousands. The plant is evidently happy and the roots in perfect health. The fresh green moss and the robust foliage demonstrate that the compost is right. Please note the decided improvement in this season's over the older growth. The plants were formerly grown in loam and peat; the present growth is the result of changing the compost. Many of the



Stanhopea Lowi, var. Amesiana.

plants cannot be removed for repotting without destroying the present pot to save the roots.

There are several varieties of Phaius very easy to cultivate, and one occasionally meets with vigorous plants, but in this instance such difficult growing subjects as *P. Humbolti* and *P. tuberosus* have been used for hybridising, and the progeny grew very slowly until all were placed in leaf mould. I hope to send you shortly a photo of a hybrid Cattleya rooting in a similar way. All our Cattleya and Laelia hybrids—of which we have eighteen houses in St. Albans, England, and Bruges, Belgium—are now grown in leaf mould, and are the admiration of all who see them.



## Bulbs for Early Forcing.

Bulbs for early forcing ought to be potted or boxed within the next week or two, as a frequent cause of failure in early batches is that they are taken into heat before they have sent out plenty of active roots. I know that one may occasionally meet with an individual who professes to be able to manage such matters better than ordinary mortals, they pride themselves on their ability to introduce bulbs into a sharp heat a few weeks after potting has taken place, and yet to get wonderful results. I, however, have never been fortunate enough to achieve success by such haphazard methods; to me the old dictum, "get the roots thoroughly in advance of the growth," appeals as strongly as it ever did, and at present I can see no prospect of Nature reversing the order of her ways in this respect.

If those intended for early forcing are potted now in sweet friable soil, and plunged in cocoa-nut fibre in the open air, by the time the tops have grown an inch or two the soil will have become permeated with healthy roots. Those who have hitherto found a difficulty in getting suitable soil should try cocoa-nut fibre, as nearly all bulbs thrive splendidly in it. Another excellent plan is to mix one-third of this useful material with the potting soil.

White Roman Hyacinths must, of course, be included among the bulbs requiring early attention. During the last two years they have been so expensive that it is a pity a substitute cannot be found: for market purposes there is but little if any money to be made by growing them to supply cut flowers. Those who have bulbs which were forced last year should pick out the best and pack them closely in boxes. If these are brought on steadily they will supply numbers of small spikes suitable for use when making wreaths and button-holes, as large spikes have often to be reduced in size for such purposes. The white Italians come in very useful for spring work. Last spring I saw a fine breadth of the wild white Hyacinth in a wood, and it struck me that if taken in hand and cultivated well it would make a splendid pot plant, and it is quite possible it might force well.

Among the Nareissus, Paper-white grandiflora, and Double Roman, are excellent for private establishments, as they may be flowered with ease by the first week in November, and the latter has cheapness as well as great utility to commend it. Poeticus ornatus ought also to be potted early, although it will not bear very sharp forcing. Ard Righ (giant yellow trumpet), and the Double Van Sion, are well known to be excellent for early forcing, provided the bulbs are potted during August. Where large quantities of cut flowers are required Princeps should be extensively grown, as notwithstanding its low price it is one of the most showy pale yellow kinds, and it forces splendidly.

Tulips, with the exception of a few varieties, are much lower in price than last year, and for flowering from the middle of November till Christmas, I know of nothing better than Due Van Tholl (scarlet), and Rose, the latter variety will usually flower slightly earlier than the former. For an early white L'Immaculée, or a good strain of La Reine, are excellent if really good bulbs are obtained. White Pottebakker comes in a little later, and when it does come, the flowers are superior to the other whites named. The scarlet and yellow Pottebakkers are also splendid for flowering simultaneously with the white type. I have only dealt with a few good things for very early forcing, other notes I hope to add in due time.—H. D.

## Growing Asparagus on the "American Method."

A correspondent writes:—"I have been reading Mr. F. M. Hexamer's book on Asparagus growing in America; what do you think of their plans of not touching the subsoil, but cultivating the top soil very well and growing on the level, plants 3ft apart in the rows, and 4ft between the rows? This would make work easier and cheaper, but could one expect such good returns as in the way you advised me, namely, bastard trenching the ground, and mixing the manure in the bottom spit as well as the top? I am thoroughly satisfied with your plan, but thought that by the other way one could put down a lot of ground quickly. I have four acres of Sainfoin, three years old; I want to get it into form for Asparagus beds. I am told that my best plan, from a farming point of view, is to plough in the Sainfoin and put it down in Wheat; then after I have gathered the crop next year it will be in a much better state for cleaning. There are wireworms in my Asparagus beds, and consequently moles, which make the beds very light; what had I better do? Is there anything that will kill Bellvine?"

[The so-called American method is simply an old-fashioned British practice, there being many acres of land in this country under Asparagus, the subsoil of which has not been broken up, but the top soil being very well done in matters of manuring and tillage, the Asparagus being grown on the level, and the

plants 3ft apart in the rows, and 4ft between the rows. It is a garden plan, to the writer's knowledge, practised over half a century with a view to produce very fine heads. The system is only adaptable where the subsoil is of an open nature, such as sandy, though on very stiff soil it would be worse than worthless bringing up stubborn material, breaking up and leaving being quite a different matter, and then doing the top soil well, fairly good Asparagus may be grown on the so-called American method. Of course the produce will be less in the first two or three years of cutting. We advise the method you have found successful, and as for the four acres now under Sainfoin intended for Asparagus, you could not do better than plough in the Sainfoin, and put the land down in Wheat, then after you have gathered the crop next year we should bastard trench the land, enrich the subsoil as well as the top soil, in every way adhering to our previous advisement. If you like to speculate, you may clean the ground as well as you can after the Wheat, manure and plant in the spring following. It will cost less, but as for the result we take no responsibility, our experience being that nothing pays so well as thorough cultivation.

The wireworm would be best overcome by dressing the ground with mustard leaves, 1½ cwt. per acre, and as for the moles they should be trapped. There is not anything that will kill Bellvine or Bindweed without also injuring other plants, though heavy dressings of salt, 10 cwt. per acre, are useful against it and couch grass. The thing is to free the ground of the roots as much as possible, and keep the tops pulled as often as made, thus weakening the underground part, and ultimately causing its destruction.]

## Notes on Conifers.

Conifers can scarcely be termed town trees, for many of them will not thrive very well in a smoke-laden atmosphere or impure surroundings. Nevertheless, they are often found in gardens in the neighbourhood of large towns, but they are often very sickly looking specimens. Perhaps one reason may be because they are planted in unsuitable positions. One may often notice that they are planted round about dwelling houses and other buildings as a kind of protection or screen, and very often in soil that is not at all suitable. To obtain good specimens of many kinds they must be planted in good soil, that does not get very dry during the summer, and be in sheltered or partly sheltered situations. There are some places in England where most Conifers do well, but in a general way they grow best, I believe, in Scotland, where the climate is more cool and moist during the summer. There are some few species that are suitable for town gardens, but they do not last very long in a healthy condition.

Propagation may be effected in several ways, the most natural method being by seed. When many of the species were first introduced into this country, great difficulty was experienced in obtaining seed. Many that are grown from seed at the present time were propagated by necessity from cuttings. The Pine and Fir tribe are generally raised from seed; several may be increased by cuttings, as well as by seed, such as the Retinosporas, Cupressus, some of the Junipers, and some others. Some are grafted and inarched, and others may be increased by layering. The seed is sown in the spring, March and April being the best months. It takes several weeks for it to germinate; in some cases germination will not take place for one, and even two, years. The young plants of many Conifers grow very slow for the first year or two. A short time since I was shown a bed of Yew seedlings in variety, that was sown in the spring of 1896, and as far as I remember they were only about 2in or 3in high.

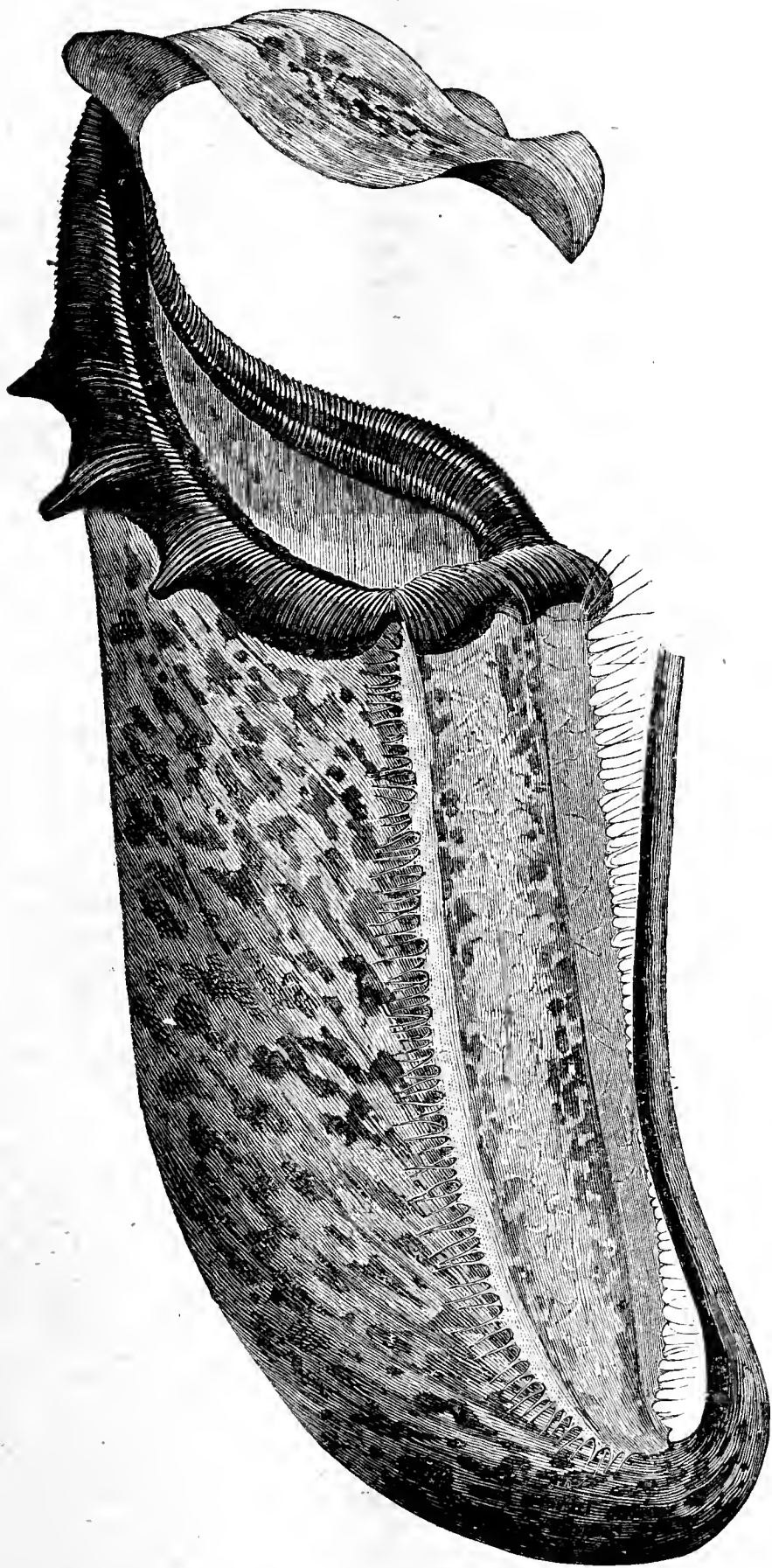
Propagation by cuttings should take place in August or September; some kinds may be rooted in the open border, but a more satisfactory way is to put them in a frame, or in pots. The frame should be in a shady position. The cuttings, which must be about 6in long, taken with a heel, be inserted firmly in nice sandy soil. Cuttings put in pots should remain in the frame during winter, where they will get well callused. They may then be introduced to a little bottom heat in spring, when they will soon become well rooted. It will then be necessary to pot them and gradually harden off.

In preparing these notes I have obtained valuable information from Veitch's "Manual of Coniferae." Anyone who may be interested in the culture of these trees and shrubs will find it a great help.—PINUS.

## Notes from Gardening Literature.

(Continued from page 157.)

All sorts of questions are asked in the old-time papers. "Is human urine a beneficial manure?" "Have any experiments been made with milk? If so what is the result?" "I am trying it on two or three Auriculas, and shall let you know



*Nepenthes x mixta.*

(See page 196.)

the effect," the conductor added in a footnote. I failed to find the note in subsequent papers.

The forcing of the Lily of the Valley was well understood in Germany, although little noticed in Britain at this time (1820-40), and I doubt if we have found out anything new about this pretty flower, except it is in the retarding of the crowns, and for that I believe we are indebted to a Dutchman or German.

If there is anyone who has an inclination to excel in the cultivation of the German Aster, here is the way to success:—"If you wish for Asters possessing beauty and magnitude, have the seeds sown in a hotbed by the middle of March, and when sufficiently strong to transplant, remove to the bed where they are intended to bloom. The soil of this bed should consist of horse dung, well rotted, and be turned for the previous six months to the depth of 2ft. Place over this, rich, fresh, strong loam, from an old pasture, with a sixth part of leaf mould, twelve months incorporated. Pare the top spit of a moory pasture, and burn it, spreading the ashes and soil 2ft in height over the subsoil. By observing this plan the Asters will attain a great height and magnitude, and produce a mass of flowers of superior size." The latter article was written by a lady. It appears to me that the roots of the German Asters would have to travel a long way to reach that subsoil of six months old manure.

There was some impostors in these earlier times, but they seem to have come over from France, and gulled our fathers by selling them so-called yellow and black Moss Roses, yellow Camellias, and yellow Lilacs. According to an account the Frenchmen sold £1,000 worth in London alone.

The prices of certain plants are often referred to, and I have no doubt they understood how to make money out of new things as well as we do now. I only give one example. *Poinsettia pulcherrima* was coming into repute about 1836, and the price of a small plant was £2, and of a plant 3ft to 4ft high, was £7 to £10. I previously remarked that some of the articles in the papers were very brief; possibly the pruning knife was applied. Here is an article on *Primula sinensis*, in which the writer, after three lines of preliminary remarks, says: "The compost I make use of consists of rich light loam and peat soil in equal parts. The seeds are sown in the month of May, in a pan lightly covered, and placed in a cold frame. When the plants have formed their first leaves they are transplanted singly into 60-pots. When their roots have filled these, they are then removed into 48's and afterwards into 32's, keeping them in the same situation, and finally into 24's, removing them into the greenhouse in October. It is necessary in all the pottings to give a good drainage of broken crocks or cinders."

Here is a curious method of growing the Hyacinth which some reader might try:—Place a bulb in the bottom of the pot with the growing point or crown through the hole and fill up with soil, placing another bulb on the top of the lower one. Of course the pot has to be suspended in the dark for a time, and also in the room or greenhouse. I was struck on one occasion by a short paragraph about the hybrid *Rhododendrons* as to their hardiness compared with the common *R. ponticum*. I have never seen it stated in print in any recent publications, but I have often remarked about the note in speaking of them, having personally noticed the same thing, and also I notice how much more *R. ponticum* suffers in dry weather, compared with the hybrids, although grafted on to *R. ponticum*.

While living in a certain part of Yorkshire I often heard the villagers speak of the Musk Tree, a name they gave to the common yellow Musk. I came across a note on *Mimulus Harrisoni*, Harrison's Monkey-flower, raised by Mr. Low, of Clapton Nursery, to the effect that it forms a vigorous, branching plant, about 4ft high. Has anyone seen it?

In the Transactions of the Horticultural Society, some very short articles are given in the form of letters to the secretary. On January 7, 1824, some forced Rhubarb was sent to a meeting of the society, and had been forced in the following manner: "The roots were taken up as perfect as possible, leaving the earth which adheres to them still attached. They are placed in a bed of decayed tan, or in boxes, or pots, filled with the same, and set in the Mushroom house, which, by the aid of a flue, is kept at a temperature of 45deg to 55deg. Tan is preferable to leaf mould, because it receives water more freely when given to the plants. After the forcing is finished, the roots are kept under long litter or manure till warmer weather in April, when they are divided by a sharp knife, and planted in a north border, in the open ground. In the following autumn the strongest are fit for forcing again."

The foregoing account is hardly up to the practice of the present day; and the following is how a gardener at Thirkleby, Yorkshire, secured a good crop of Onions by getting rid of the Onion grub. The soil of the garden was very strong. He trenched it in winter, digging in manure at the same time, and left it exposed to the frost in a rough state till the time of sowing. It was then raked without digging, and the Onion seed sown in drills 8in apart. The crops obtained by this practice were not only uninjured, but were of superior size, and had never failed. He sowed his Onions in the middle of February, if the ground was in a fit state to work properly, for the earliest sown Onions are always the largest. I am afraid, however, that the simple remedy of trenching will not always prevent the attacks of the Onion grub.—J. B. S.





#### ***Astilbe chinensis* var. *Davidi*.**

This is another of Messrs. Veitch's introductions through Wilson, their collector in China, and was given a First Class Certificate by the Royal Horticultural Society on August 5. It attains to 3ft and 4ft in height, bearing effective spikes of flower of a reddish-purple colour. On page 197 we reproduce a reduced figure of the plant.

#### **Figs in Borders.**

In replanting, ram the compost, well incorporated, thoroughly about the roots, spreading these out evenly well up to the surface, and with soil between each layer, so as not to have all the roots together. This will ensure a fibrous root formation, steady progressive growth, short-jointed fruitful wood, a solidified soil duly stored with nutrition, securing, with judicious ventilation and management, solidified growth and large heavy fruit. The border may be 2ft in depth. Should the drainage be good, it will only be necessary to detach the roots as advised, confine the roots to the narrow border, and remove some of the old soil from amongst the roots, supplying fresh compost and top-dressing as above stated.—GROWER.

#### ***Cordyline australis*.**

It is the general desire of good cultivators to prevent their foliage plants, such as *Dracenas*, *Codiaeums*, and *Cordylines* from running to flower. At times it is difficult to prevent old plants, or even fairly young ones, from producing their natural inflorescence, the forerunner of fructification and fertility. Nor are the plants inelegant then; on the contrary, we have often admired their exceeding beauty, and *Cordyline australis* has lovely sweet-scented white flowers. From a photograph of a flowering plant by Mr. A. O'Neill, of Dublin, an illustration is presented on page 205. This handsome southern exotic plant is, perhaps, as often called *Dracæna*, as *Cordyline*, maybe oftener, but we have adopted the botanically accepted name.

#### ***Nepenthes* × *mixta*.**

The interesting in *Nepenthes* or Pitcher Plants may vary, but it will always exist. More of them might be added to collections in gardens, while yet many gardens are without any at all. It is certainly the exception to find a collection of insectivorous plants, including *Darlingtonia*, *Dionæa*, *Sarracenæ*, and *Droseras*, in private gardens, and yet how strange these plants are, and how exceedingly interesting! *N. x mixta* is a hybrid as our sign (x) denotes, raised by Messrs. J. Veitch and Sons, Ltd., from *N. Curtisi* and *N. Northiana*, the first-named being the pollen parent. The pitchers are about 8in in length, pale yellowish green, and blotched with red. The mouth of the pitcher is of a deep crimson colour. (See illustration.)

#### **Treatment of Plants Transplanted from Pots.**

Many hardy plants are now grown in pots by florists and nurserymen, and transplanted in summer at convenient times. The risk in transplanting pot-grown stock is very slight if the plants be strong and carefully grown, but they need care, observes "Meehans' Monthly," from the planter when they are set out. The reason such plants transplant safely in the summer season is that, grown in pots the roots are induced to form a ball more or less compact, which is not disturbed in the moving. But the compactness of the ball, in one respect a safeguard, is in a way a danger, as when placed in well-prepared ground it is harder than the surrounding soil, and rain or artificial watering will not properly reach the roots till they commence to grow, and the growing plant will suffer. The prevention of trouble is made easy by soaking the ball in water just previous to the setting. If the ball be not hard, and is to every appearance moist all the way through, such treatment may not be needed, as the watering that follows the planting will be sufficient. It is further desirable, as in every case of planting, to have the soil firmed around the ball of roots.

#### ***Hydrangea* *superba*.**

This is the name given to what appears to be a beautiful hybrid form, the result of *Otaska* × *cyanoclada*. This was first seen in America, where Mr. M. H. Walsh is the raiser of it, about two years ago. It has immense heads of beautiful flowers, the petaloid bracts being very large. Figures of it appear in the American gardening journals.

#### ***Erica* *mediterranea*.**

The small illustration of this hardy and very showy species shown on another page represents a bush which reaches 8ft at its highest point. The photograph was taken by Mr. A. O'Neill, Thomas Street, Dublin, in the Glasnevin Botanic Garden, and though we knew that *Ericas* and *Ericaceæ* in general grow luxuriantly in the sister Isle, we had never heard of *E. mediterranea* reaching 8ft before. Is this a record?

#### **The Importance of Mulching Trees.**

The urgency of cultivating soil about trees is often made impressive by horticultural writers and teachers, while the importance of mulching is less brought to the fore. Soil is cultivated with two objects in view—of conserving moisture and removing weeds. Mulching shades the soil and helps it to retain moisture, fulfilling one of the objects most excellently; and also to some extent it keeps down the weeds. Remove a good mulch from about a tree during a drought, and if there has been any rain since the transplanting, the surface will be seen to be moist and cool. Manure containing an abundance of straw is the best, though plain straw answers most purposes.

#### **Increasing Magnolias.**

The *Magnolias* which seed freely are readily increased by sowing the seeds in early spring, keeping the seeds in a moist condition from the time they are gathered. Some sow the seeds in autumn, some after they are gathered, placing a covering of leaves over them for the winter. But keeping them in slightly damp soil all winter and sowing early in spring is a sure way; of course, watching the seeds right along through the winter to see that everything is right. *Magnolias* may also be grafted, and are increased in this way by many who use the *M. acuminata* stock for the purpose. What suggests the subject now is that the Chinese and Japanese sorts are mostly increased by layering, and this is the season of the year to do the work. Shoots of the present season are used; these root quickly, and by fall will be nicely rooted. Many propagators cut off these layered plants from the parent ones in late autumn, burying them almost completely in some sheltered position till spring, but it is just as well to leave them undisturbed over winter, cutting them off in spring. The only gain by performing the operation in the fall is the getting that much ahead with work.

#### **Hedges of Roses.**

The nurseryman is often asked to recommend some shrub to form a hedge, screen, or thicket. Usually, I think, *Roses* are not thought of; yet there are several sorts unequalled for the purpose by any "shrub." Kewites, or those who have visited Kew, may remember the grand sight some of the clumps of *Roses* make there when in flower. I have in mind (writes Joseph Meehan in an American exchange) a sight of a grand display of *Rosa moschata*, which it was my privilege to see at Kew at one time. Another sight, which "haunts me still," was an arbour-lined avenue of *Rosa setigera*, at Dosoris, Long Island, when William Falconer was in charge of the grounds. To-day I saw a thicket of some extent of the lovely Japanese Rose, *Rosa multiflora*. The thicket was 8ft high, and, covered as it was with thousands of the small white flowers, it was a sight uncommon and beautiful. For a thick, spreading hedge, what equals one of *Rosa rugosa* at this season of the year? Covered with its large single pink flowers, with their background of lustrous green leaves, it is of great beauty. Then it has flowers off and on all the season through. There is the large, healthy foliage all summer long, and, to add to all, the bright red large berries must not be overlooked. Having in mind the sorts *setigera*, *multiflora*, and *rugosa*, all are easily raised from seeds. Gather the berries the last thing in autumn, wash them free of pulp, and place in a cool shed, in slightly damp soil, and they will be in prime condition for sowing outdoors in the earliest days of spring.

## Cucumbers: General Crops.

Shorter days necessitate closing the house earlier, also syringing sooner, so as to have the foliage dry before dark. Fire heat will be necessary in cold weather to maintain a temperature of 70deg to 75deg by day and 60deg to 65deg at night. Keep the growths fairly thin, removing old growths so as to make room for young ones, and so provide a succession of bearing parts. Stop the shoots one joint beyond the fruit unless growth is wanted, then allow more extension, but avoid crowding. Encourage root action by a steady bottom heat of 80deg, surface dressing with lumpy loam and sweetened horse droppings, and afford liquid manure in a tepid state whenever water is required. Do not allow the fruit to hang after it becomes fit for use, and avoid overcropping.

**AUTUMN FRUITERS.**—Afford every encouragement to these plants, stopping so as to insure an even spread of bearing growths. Remove the first fruits if the plants are weakly, and in any case the male blossoms and tendrils. No shading will now be necessary. Avoid syringing in the morning, and only use the syringe on fine afternoons, then early and lightly, keeping the house damped as occasion requires. Admit air in moderation. Aim to encourage sturdy growth by early and judicious ventilation whilst opportunity offers, but without gentle fire heat this is hardly practicable at this season.

**WINTER FRUITERS.**—Seeds having been sown at the beginning of August the plants will soon be ready for to plant out. The house must be a light one, and have means of securing a temperature of 70deg to 75deg in all weather, also of maintaining a bottom heat of 80deg to 90deg. The first consideration is to thoroughly cleanse the house. Plants from seeds sown early in August will fruit in late autumn, but they must not be cropped much, better not at all, if they are to give a plentiful supply of fruit from Christmas to spring.

**CUCUMBERS FOR CHRISTMAS AND ONWARDS.**—For producing these in the crispest and most acceptable form for table use, there is nothing like young plants. Seeds sown on September 1 will do this in light, well-heated, and properly managed structures. Too much strength cannot be got into the seedlings by keeping them near the glass. Everybody has his particular favourite variety. I find a carefully selected form of Rollisson's Telegraph, Rochford, and Cardiff Castle, most satisfactory in crop, solidity, colour, and quality of fruit. The seeds are best sown singly in large 60-sized pots, a little more than half-filled with soil and covered half an inch deep. Keep the plants near the glass, earth them as they grow, and transfer to 48's, when they need a shift, placing a stick to each, to which secure the growth as it advances. Rub off the laterals as they show, training with a single shoot; they will be fit to plant during the first fortnight of October.

**PLANTS IN PITS AND FRAMES.**—The growths of these will need to be trained thinly as a safeguard against damp. Watering must be done early and judiciously, as damp and cold soon injuriously affect the foliage and fruit at this season. A light sprinkling may be given at closing time on bright afternoons; but water will not be much needed after this, or very little of it, the plants obtaining sufficient moisture through the decay of the fermenting material of the beds. The beds must be lined with stable litter, and a little air given at the back to allow of any steam escaping, the temperature being kept at about 65deg at night. There will generally be some warmth from the sun in the daytime, and by employing a covering of mats over the lights on cold nights, with proper attention to the tending and care in management, Cucumbers will be obtained from these structures for many weeks to come.—G. A.

## Peaches: Pot Trees for Forcing.

No method succeeds better than a few select varieties established in pots, such as Alexander and Waterloo, Early Louise, Hales' Early, and Stirling Castle Peaches, with Cardinal and Rivers' Early Nectarines. These afford a supply of fruit during a period of four to six weeks, and if only a few dishes, are welcome in April and May. The trees should now have the wood ripe, and the buds plumped.

If they are in small pots and a shift is considered necessary, repotting must be attended to at once, whilst the leaves are on the trees, being content with removing the loose soil and drainage, shortening any long bare roots, and only giving such pots as will admit of about an inch of fresh soil being rammed tightly round the balls. With judicious watering, the trees soon recover the potting, especially if sprinkled occasionally, and shaded from powerful sun for a few hours each day for a short time; but this is only necessary in very bright weather, and when the roots have been much interfered with. The trees should be continued under glass until the leaves are all down, when, placed on and plunged in ashes outdoors, they will not take any harm, but profit by the cleansing and refreshing autumnal rains, and be in condition for housing in December,

so as to swell their buds gradually and be in flower by the new year or soon after.

**PLANTING FOR EARLY FORCING.**—If new houses have to be filled and fruit is wanted next season at an early period, plant the trees in late summer or early autumn, as soon as the growth is perfected, the foliage and wood being mature. The most suitable trees are those which have been for two or three seasons trained under glass or to south walls, and carefully lifted the previous autumn to ensure a fibrous root formation, and stout, short-jointed, well-ripened wood. Even now, if there be any tendency to a late growth, or any doubt as to the maturity of the wood, the soil should be taken out as deeply as the roots, one-third the distance from the stem that the branches extend on the trellis or wall, and the trench so made ought to remain open a fortnight or three weeks, when it may be filled in again, care being taken that the trees have sufficient water whilst the trench is open.

All that is necessary, however, is to prevent severe flagging. This would effectually check the growth and ensure ripening,



**Astilbe Chinensis Davidi.** (Height from 3 to 4 feet.)

whilst it will materially assist lifting with a ball or mass of fibrous roots. This, and the formation of new fibres after planting, are essential to a good set and satisfactory stoning of the fruit. Plant the trees for early forcing by the end of September, and commence lifting early forced trees as soon as the foliage gives indications of falling. Work of this kind should be performed very promptly.

New borders must have efficient drainage, the bottom of the border being concreted if the soil underneath be unfavourable, or better laid with bricks on flat and run with cement, the border being enclosed in walls, so as to confine the roots. Drains must be provided with proper fall and outlet, rubble being placed over them a foot thick, the roughest at the bottom and finest at the top, and if covered with a layer 2in or 3in thick of old mortar rubbish, the drainage may be considered sound for an indefinite period; indeed, the roots seldom pass the calcareous layer, becoming fibrous and matted therein, and the trees can be lifted and root-pruned as required without interference with the drainage. A border one-third the width of the trellis will be sufficient in the first instance, and 24in depth of soil is ample. The compost should be made firm, as Peaches and Nectarines are healthy and fruitful in proportion to the compactness of the soil. This has special application to soils inclined to be light and porous.—A. B.



# NOTES & NOTICES

## Missouri Botanical Garden.

The thirteenth report of the garden has been issued. It contains the reports of the director and the officers of the Board; also an exhaustive illustrated scientific paper on the Yuccæ, by Dr. Trelease. The number of species and varieties of plants now cultivated in this garden is 9,967. The number of visitors during 1901 reached a total of 91,262.

## Appointments.

Mr. James Williams, for the past four years general foreman at Skelton Castle, the residence of W. H. A. Wharton, Esq., M.F.H., has been appointed head gardener to Col. Chaloner, Guisborough Abbey, Guisborough, Yorks. \* \* Mr. Charles H. Buck, of the Royal Horticultural Society's Gardens, Chiswick, as representative in the north of England and in Scotland, to Messrs. Wm. Bull and Son, nurserymen, King's Road, Chelsea.

## Gладиoli from Langport

From Messrs. Kelway and Son, of Langport, we have received some magnificent spikes of Gladioli, in the following varieties: W. Newcombe, flowers of enormous size (6in either way), and coloured a lovely salmon-pink tint, very distinct and charming; Taunton Deane, strong blooms, close-set spike, colour bright crimson-carmine, with yellowish throat; Shazada, a good amarant-purple Gladiolus, but rather loose-built spike; Lady Wimborne, broad, and finely-arranged spike, flowers large, even, and beautifully opened, colour white, faintly suffused with lilac-purple, and has a bright purple-lined throat; Mayor of Swansea, form rather "raked," blooms good, and coloured deep scarlet, with tea-shaded throat; lastly, Mr. Hobhouse, one of the best in every way, a charming rose-crimson variety.

## Scottish Appointment.

Mr. William Williamson, Tarvit, Cupar-Fife, has been appointed horticultural lecturer for the East of Scotland Agricultural College, Edinburgh. Mr. Williamson has occupied the position of head gardener of Mr. J. Home Rigg of Tarvit for the past thirty years. He has been a very successful horticulturist, as shown by his successes at the Dundee and Edinburgh exhibitions, taking the leading fruit prizes at Dundee for many years. He enters on his new sphere of labour in November, which comprises visiting and lecturing throughout the twelve counties associated with the college, the subjects of lecture being varied to suit the circumstances of the different districts. Mr. Williamson is the author of two important volumes, viz.: "The Horticultural Handbook," and "The British Gardener."

## The Law as to the Use of Barbed Wire.

Inquiries which reach us from time to time would go to show that many of our readers are not aware of the existence of an Act of Parliament under which the use of barbed wire for fences along public roads, streets, or other thoroughfares, leaves the owner open to action for damages for any injuries caused by such wire. For the information of those of our readers who may not be already cognisant of its existence, we may mention that under this Act it is provided that: Whereon land adjoining a highway a fence is made with barbed wire, or in or on which barbed wire has been placed, and such barbed wire is a nuisance to such highway, it shall be lawful for the local authority to serve notice in writing upon the occupier of such land, requiring him within a time therein stated (not to be less than one month nor more than six months after the date of the notice) to abate such nuisance. If on the expiration of the time stated in the notice the occupier shall have failed to comply therewith, it shall be lawful for the local authority to apply to a court of summary jurisdiction, and such court, if satisfied that the said barbed wire is a nuisance to such highway, may by summary order direct the occupier to abate such nuisance; and on his failure to comply with such order within a reasonable time the local authority may do whatever may be necessary in execution of the order, and recover in a summary manner the expenses incurred in connection therewith.

## Our Fruit and Bulb Number.

On the 25th of next month (September), which is the earliest issue after the great Crystal Palace fruit show of which we hope to have a full and interesting report, the *Journal of Horticulture* will be devoted to articles on, and illustrations of, bulbs and also fruit culture. Fruit and bulbs will thus both receive a goodly share of attention, and we can promise a very useful and attractive number. The text and the illustrations will be of a special nature. If our readers can add to the interest of the issue by sending notes for the Readers' Views' page or other department, we shall appreciate their efforts.

## Cassell's Dictionary of Gardening.

This useful publication has now reached the 16th part, and maintains the excellence in point of illustrations which we noted at the start. The condensed form of description is somewhat of a trouble till one practises from the pages, but one must not grumble, seeing each part is furnished for seven bawbees apiece. In dealing with the genus *Prunus*, which includes the Apricot, Plum, Cherry, Peach, and Nectarine, the editor (Walter P. Wright) places each of the species with their botanical name under the English appellation. Thus under Plums, is placed all the species of this fruit, as the Cherry Plum, the Cocomilla Plum, the true Plum, the Bullace, and so on. Garden varieties of *Prunus communis*, the true or common Plum, of course come under the English name. To those who understand the plan, and all should be able to, the arrangement will find favour. This part carries the work up to, and includes part of the dictionary of the Rose.

## The Year, 1901.

As affecting vegetation the weather was chiefly remarkable for the scanty rainfall during the growing period of the year. The deficiency, says Ed. Mawley, in his "Report on the Phenological Observations," was not confined to any part of the British Isles, but was more keenly felt in the English counties than in either Scotland or Ireland. Wild plants came into flower very late, but not quite as late as in the previous year, which was an exceptionally backward one. The swallow, cuckoo, and other spring migrants were, as a rule, rather behind their usual dates in reaching these islands. The crops of Wheat, Barley, and Oats were all more or less above average in Scotland and Ireland. On the other hand, in England, although there was a fair yield of Wheat, that of Barley and Oats was very deficient. Hay proved everywhere a small crop, and especially so in the southern districts of England. Beans, Peas, Turnips, Swedes, and Potatoes were mostly under average in England, but either good or fairly good elsewhere. The yield of Hops proved singularly abundant. Apples, Pears, and Plums were nearly everywhere below average, especially Apples, but the small fruits, as a rule, yielded well. Taking farm and garden crops together, seldom has there been in England a less bountiful year.

## Tree Planting in Shedden Park, Kelso.

With a foresight recognised in all their business dealings, Messrs. Laing and Mather, the King's nurserymen and seedsmen of Kelso, set about some time ago selecting some of their finest standard ornamental trees, planting them in suitable tubs to be in readiness for the demand expected to occur amongst their clients in planting commemorative Coronation trees, or "King's" trees. With a generosity also characteristic of the firm, Messrs. Laing and Mather cordially offered some fourteen of the finest of these trees to the trustees of Shedden Park, to plant in suitable vacancies around the park; also to replace some fallen monarchs that fell in the terrible gale of December 14, 1900. The trustees very readily accepted the offer, and these trees, now permanently planted, being tall and well grown, are already an ornament to the park; but very shortly their beauty and utility will be greatly enhanced as they increase in size and shade. Amongst the trees we were pleased to notice that some of the graceful white Birches (*Betula alba*) were included, also the wide spreading, symmetrical bee-loving Limes or Linden trees (*Tilia vulgaris*), also the gorgeous varied-hued Sycamores, Maples, or Acers, so well known for their autumnal effect. But the "King of the Forest" amongst trees was not omitted; and, in compliance with the express wish of the King for commemorative Oak trees to be planted in public parks in commemoration of the historic event, a specimen of the British Oak (*Quercus pedunculata*) was given a prominent place, and which will be afterwards known as "The King's Tree."

**Death of the late Edinburgh City Gardener.**

Mr. Angus M'Leod, the late superintendent of Edinburgh public parks and gardens, died at his residence, Sylvan Place, on the 20th inst. Mr. M'Leod, who retired in November, 1900, held the position of city gardener for about twenty-five years, his previous appointments being gardener at the seat of Sir W. P. Galloway, Thirkleby Park, near Thirsk; at Burghley Park, the seat of the Marquis of Exeter; at Milton and Wentworth House, the seat of Earl Fitzwilliam; and at Newbattle, the seat of the Marquis of Lothian. During his occupancy of the city gardenership he did much to beautify the city, and when he retired in 1900, members of the Council spoke in high praise of the work he had done. It was while he was superintendent that the Blackford Hill, the Braid Hills, Inverleith, and other parks and gardens were acquired.

**Royal Horticultural Society.**

The Royal Horticultural Society will hold a special exhibition of Dahlias on September 2 and 3 in conjunction with the National Dahlia Society, in the Drill Hall, Buckingham Gate, S.W. At this meeting only Dahlias can be shown, with the exception of flowers, fruits, &c., for certificate. All Dahlias, including those shown for certificate, must be left on exhibition until 5 p.m. on the second day, but other plants may be removed as usual. For schedule of prizes, see Royal Horticultural Society's "Book of Arrangements for 1902," pages 91 to 93; or separate schedules can be obtained on application to either Mr. J. F. Hudson, M.A., Gunnersbury House Gardens, Acton, or to Mr. C. E. Wilkins, 19, Lyndhurst Road, S.E., joint secretaries to the National Dahlia Society. A lecture on "Hardy Fruits in Yorkshire" will be delivered by Mr. A. Gaut at three o'clock. \* \* At a general meeting of the Royal Horticultural Society, held on Tuesday, August 19, fifteen new Fellows were elected, amongst them being Lily, Dowager Duchess of Marlborough, and Sir Clinton E. Dawkins, K.C.B., making a total of 885 elected since the beginning of the present year. \* \* Intending exhibitors at the Crystal Palace Fruit Show, on September 18, 19, and 20, can obtain an official entry form, together with schedule, on application to the secretary, Royal Horticultural Society, 117, Victoria Street, S.W. (a penny stamp should be enclosed). Entries for this show close on September 11.

**The Fruit Crop in Fifeshire.**

Of recent years considerable progress has been made in the ancient "Kingdom" with small fruit culture, particularly the cultivation of Strawberries, Raspberries, and Gooseberries, and seldom has such difficulty been experienced in making an approximate estimate of the season's crop. With a late, cold spring, leaf and fruit buds were both much belated, and this, followed by excessive frosts and strong gales in May and June, proved exceedingly prejudicial, both to the set fruit and later Apples just in bloom. Plums have come much into favour in some parts of the country, but all over the crop is one of the lightest for years. Here and there the harvest is a complete failure, which is more to be regretted as in recent years many of the growers have been increasing the breadth of this crop, replacing some of the more unprofitable varieties of Pears with the finer kind of Plums. Pears, which have always been a staple production of the north-western districts, are in every case much below the average. Early varieties were blasted with frost, and the finest classes have been getting far too little sunshine for them to have either weight or flavour. The same remark applies to the Apple crop. Their lateness also will depreciate value, and it is computed that the shortage in returns of this year's harvest of Apples, Pears and Plums, will amount to a few hundred pounds, compared with last season, which was only an average one. Cherries are far short of the estimate made some months ago, although ripe samples were received pretty early. Raspberries and Strawberries are much later than last year, the stormy weather of June having retarded their progress. Prices ranged from 1s. to 1s. 3d. per pint. Gooseberries are more prolific than was at one time expected, but caterpillar, fly, and other pests have wrought sad havoc, and the crop is short. The green-crop pulling commenced in the end of June, and commanded only a hardened price, 10s. 6d. per cwt. being the quotation for them. Notwithstanding the very backward weather, Currants

have turned out a good crop on the whole. With a few growers the Black Currant harvest, however, is almost a failure on account of the ravages of the gall mite.

**English Hops.**

The first pocket of new English Hops this year has been produced by a Worcestershire grower, Mr. R. Bagshaw, Plum Leigh, Sinton, near Worcester. Considering the unfavourable season the quality is very good, and perfectly free from disease. The hops, however, are small, showing the extreme lateness of the season.

**Paris Chrysanthemum Show.**

The programme of the general autumn exhibition of the National Horticultural Society of France (Chrysanthemums, fruits, fruit trees, and Legumes in season) has been published. This exhibition will be held from Wednesday November 12 to Wednesday, November 19, in the conservatories of the Cours-la-Reine. Enquiries should be directed to the President of the Society, 84, Rue de Grenelle, Paris.

**Show at Alton, Hants.**

The Alton Horticultural Society held their first fruit, flower, and plant show on Wednesday week in the beautiful grounds of Anstey Manor Park, by kind permission of Gerald Hall, Esq. Entries came in slowly at first, but by dint of some hard work on the part of the president, the hon. secretary, and some members of the committee, a very creditable number was got together, and all the available space in three large marquees was filled. It is twenty-six years since a show was last held in Alton. The sum of £41 5s. 6d. was given in prizes, and over £35 was taken at the gate. The show itself was an excellent one. The outstanding features were undoubtedly the groups of plants in the open section, and the table decorations in section 6. In both of these divisions the exhibitors displayed exceptional taste. Potatoes also made a splendid show, while the vegetables generally were considered very good. The first prize for groups of plants, arranged for effect, was taken by a splendid collection sent from the Manor House by Mrs. Hall (A. H. Campin, gardener).

**Isle of Wight Gardeners' Excursion.**

A fair proportion of members of this new association, including the chairman, Dr. J. Groves, J.P., and the hon. secs., W. Tribbick and A. W. Rime, visited Ventnor on August 21. This picturesque town, with its magnificent views of land and sea was seen at its best. The association are much indebted to these who opened their establishments. The well-kept and extensive nurseries of Messrs. Drover and Son were first visited, and proved a great attraction. Large quantities of Grapes, Peaches, Nectarines, and Tomatoes are cultivated, the latter, despite the season, bearing exceptionally heavy crops. Undermount (H. Mitchell, Esq.), was next inspected. Undoubtedly it is one of the finest and best kept gardens in the island, reflecting infinite credit on the owner, and on the gardener (Mr. Cheal) alike, and with which our members were enchanted. Plants of every description are largely cultivated. A special feature was the spacious and ornate conservatory furnished with huge Palms and choice climbers, growing luxuriantly and eliciting the admiration of all. In one of the fruit houses we noted a fine tree of Stanwick Elruge Nectarine, carrying a good crop of huge fruit, whilst on wall in the open, heavy crops of Plums were fast ripening. Large batches of Azaleas and Chrysanthemums were looking extremely well. Mr. Cheal piloted the party with genial courtesy, and was highly complimented on the cultural skill displayed in his charge. Macrocarpa (Miss Mitchell) is also worthy a visit at any time from horticulturists. Begonias (tuberous) are a speciality; Mr. W. Sheath, the able gardener here, being unquestionably an adept in the cultivation of the showy subjects, as was so clearly demonstrated by the perfect specimens in pots and in the beds and borders in the open. Eucharis, Pancratiums, Ixoras, Clerodendrons, Calanthe, &c., were in robust health, as also were the Chrysanthemums, and free from the dreaded rust. In the fruit garden, clean growing Pears were plentiful. The condition of the place generally spoke eloquently of the gardener's cultural skill, and the keen interest of his employer. Tea being partaken of, generously provided by Miss Mitchell, a walk on the esplanade and public park terminated a most enjoyable outing.



## Rambles in Switzerland.

(Continued from page 168.)

Geology and archæology have taught us from facts—and facts, like figures, are tough evidence, that we have wrongly interpreted the only written record of man's first existence on our globe. Those facts tell that man was here ages before that in which he has been usually thought to have been created. Prominent among those facts are the remains of the Pfahlbauten, or lake-dwellings, in Lake Zurich. That word of ugly aspect is a pure German word, signifying "pile-buildings"—houses on a structure of piles or posts. The inhabitants lived many thousands of years ago, but have left "no record of their date remaining" but the submerged remains of those piles, the stone implements they employed, and fragments of their daily surroundings that have been extraordinarily preserved in the peat formed where water had been below their dwellings. The first discovery of the remains of these dwellings has thus been told:—"In 1853, the inhabitants of Ober-Meilen, a village on the lake of Zurich, availed themselves of the unusual lowness of the waters to reclaim a piece of land from the lake. The excavations disclosed a number of remains of deeply-driven piles, formed of various forest trees. In the mud around these piles the attentive investigation of Dr. Keller detected the remains which threw the first light on the nature of the discovery. There, heaped together, lay stone axes, and hammers, and chisels or celts with their hafts of horn, rude implements for crushing corn, a great variety of coarse pottery, implements of bone, lance and arrow-heads, knives, saws, &c., all of flint, in rich abundance, although flint is not a natural product of Switzerland. Some of the smaller celts, or chisels, are formed of nephrite, a species of transparent jade, a stone imagined to be entirely peculiar to the East. The saws, in particular, are curious examples of human ingenuity under difficulties. They are formed of length in flakes of flint, one edge of which is finely notched, and the other fitted into a neatly formed long wooden handle, the perfect preservation of which may probably be attributed to the antiseptic influence of the peat wherein it had so long remained. A kind of bituminous cement appears to have been used for securing the saw in its handle.

One would like to know how the pile-driving was managed, but driven the piles were, at a distance from 1ft to 300ft from the shore, at a depth of 6ft or 7ft, gradually advancing into deeper water. They were then extended parallel with the shore till the pfahlbau assumed somewhat of the form of a narrow parallelogram. At Morges, on the lake of Geneva, the piles extend 1,200ft in length, by 120ft in width, giving a platform surface of some 18,000ft. On this M. Troyon calculates that some 316 cabins may easily have stood; which, only allowing four persons to a cabin, would give a population of 1,264. On these piles, driven at short intervals, was laid a platform on which stood the cabins, constructed, as there is good authority for believing, of wattled work plastered with clay. From the extraordinary number of reliques found it is supposed the planks of the platform were not set close together, and that things were hence continually falling through; but there would scarcely appear need for such an hypothesis. It is clear that the great mass of pfahlbauten were fired, purposely or accidentally. In buildings so constructed fire would spread too rapidly to allow the inhabitants to save much of their property, which accordingly would sink to the bottom of the lake. Indeed, the carbonised state of many things, especially the vegetable products, has preserved them for the examination of modern science.

In the masses of carbonised grain discovered at Wangen and elsewhere, Professor Oswald Herr recognised several cereals—*Triticum vulgare*; *Triticum dicoccon*; also *Hordeum distichon*, and *Hordeum hexastichon*. The pfahlbauten of Wangen and Robenhausen have also furnished abundant examples of a coarse bread savouring rather of bruised corn than meal. It was probably baked on hot stones, and covered with hot embers, just as in the Rigsmal Saga 'Edda drew out from the embers a bread cake, heavy, sticky, and full of bran.' In the same pfahlbau, too, were stores of Apples and Pears cut into halves and quarters, and dried in the sun for winter food. The custom holds in Switzerland to this day, and these dried Apple cuttings are sold by measure in the markets under the name of *scnitze*. From the size of some of this carbonised fruit it would appear

that the Apples must have been of a cultivated kind, so these people were acquainted to a certain degree not only with corn, but with fruit culture.

Flax and hemp they certainly had, and the means of spinning it, which was of the last necessity for their nets. Nothing exists to show any knowledge of the art of weaving, but they contrived to manufacture a coarse flaxen plaited material. In addition to their other means of subsistence they had always the lake at command, and the great variety of fish-hooks discovered shows that they knew how to take full advantage of it with the line as well as the net.

Great, indeed, was the interest with which I inspected the numerous relics of Pfahlbauten preserved in the Zurich museum. The sharpened ends of the piles, I think, show that they were of a Coniferous tree, probably *Abies excelsa*. The Apples, halved, are black masses; they were evidently carbonised by exposure to intense heat whilst the air was excluded. They were probably stored in close vessels. The pulp is black, a mere mass of charcoal; the core is somewhat paler, and the pips are quite distinct, as shown in this portrait of one.

What thoughts crowd upon one! What reflections that we are looking upon forms that other human eyes looked upon, since which so very many thousands of years have passed! Then, probably, as now, a winter store of dried fruits was essential for the preservation of health. I pondered over the uninterrupted succession of Pear, Cherry, Walnut, and Apple trees that margin all the roads in the Swiss valleys, and wondered what could be done with their produce. I at last was told. In winter the dried fruit is almost the only vegetable produce, except bread, that is available to mingle with their animal food. In some alpine districts that animal food is only such as has been salted, and the consequences have been told by the Rev. Mr. Macmillan in his most interesting little volume, "Holidays on High Lands." Speaking of the monks of St. Bernard he says: "During winter they have no fresh meat, being obliged to subsist upon salted beef and mutton, usually killed and preserved in September, and, which is worse still, they have no vegetables, all attempts at gardening in the place having proved abortive, so that not unfrequently scurvy is added to their sufferings."

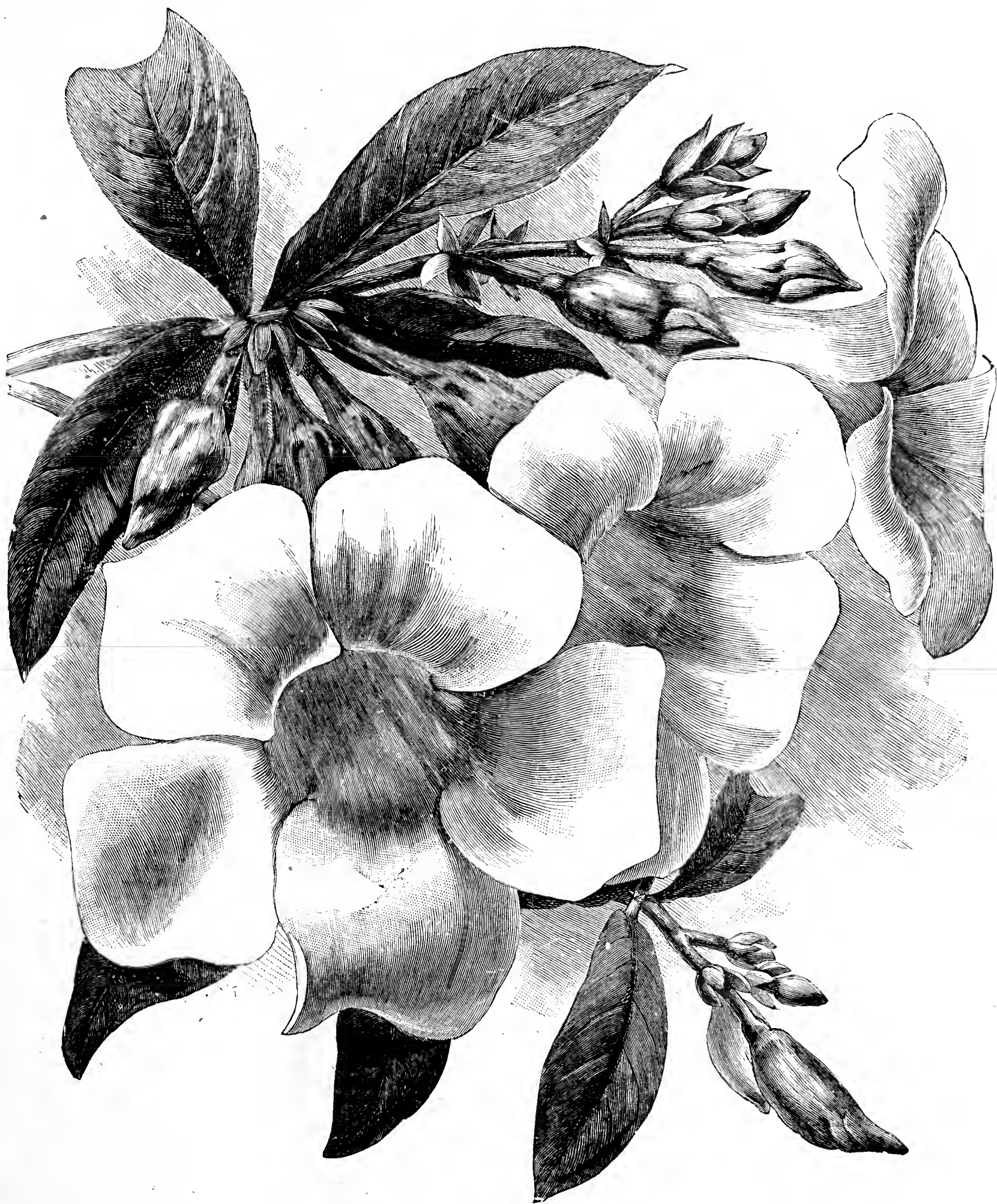
The fruit of the Cherry, including the stone, is crushed, fermented, and a spirit distilled from the mass, so potent and pleasant, that it is degraded by being named, as it is named—"Cherry-water"—Kirschwasser.

In the Zurich museum are preserved many other relics besides those of the lake-dwellers; but I must not linger here over "The Twelfth-day Queen," Jane Gray's neatly-written letters to Bullinger, nor to the "infirm-of-purpose" looking scrawl of Cranmer; but I note more fittingly for your pages that there are original and very satisfactory portraits of Conrad Gesner, Scheuchzer, and Lavater.—W. J.

(To be continued.)

## Summer Bedding: Plants and Arrangements.

When our country became more prosperous and wars abroad had for the period ceased, a new style of flower-gardening became adopted in the third decade of last century. It became the desire of the gentry and the object of their gardeners, to ensure a brilliant, massed display of certain summer-flowering plants, arranged closely and all of one sort in formal beds on parterres. In these days, when the octogenarians William Paul and Robert Fenn were little more than infants, the gardeners of Britain had an extremely limited selection of plants wherewith to work, for hybridism had only then been started, and type plants (species) were confined to the South African Pelargoniums and Succulentæ, with Mignonette, *Hydrangea hortensis*, Lee's Fuchsia, and *Calceolarias*; probably also Lobel's little blue flower (*Lobelia*) which poisons (?) the sheep in its Australian home. But with some of these a beginning was made, and was so effective, that eventually the gardeners became enamoured at the brightness and trigginess of their yearly efforts, vying the more to place a design of greater intricacy, and in colours more gaudy, before the eyes of their patrons, till at length the carpet-bedding style was evolved, and developed to unreasonable extremes. Efforts now veered to the production of subdued effects, and what the horticultural historian records as the neutral style, came into being, this giving place in later times



ALLAMANDA WILLIAMSII.



to sub-tropical bedding, so liberally practised in London parks and elsewhere to-day.

Summer bedding is now a speciality. It has been so for long, but as many more parks are yearly added to our cities, and as the public clamour ever the more for "sights," our park superintendents and gardeners after them, seem to be giving no less, but greater attention to the summer floral and foliage arrangements as features of their grounds.

While we do not desire a return to that monolatry, current for so long, we should still feel pleasure in knowing that the directors of private gardens entered more fully and with spirit into the art of summer bedding, that its perfection might be the nearer. So many gardens are under-manned, and the best in this phase of gardening cannot be attained without persistent and ample attention, that at once a large percentage of places must be subtracted from investigation, on this account alone. The gardener feels that it is simpler and better for him to fill his beds with Pelargoniums (or Geraniums as he calls them), Calceolarias, Petunias, Begonias, or Verbenas, and have little more trouble with them, than to evolve a "sub-tropical" creation of the most perfect gracefulness and colour harmony, but which demands much labour in pinching, staking, and watering.

From the notes which I have gathered just recently, in a visit to some of the leading London parks where bedding is pronounced to be the pattern to be modelled from, it will be seen that there are many extremely simple arrangements, demanding quite as little labour as the "Geraniums" do, and are equally effective (perhaps more so), and have this great merit that they will be fresh and novel in a great many gardens.

So many inquiries have been sent to this office for advice on sub-tropical gardening, that a list of the chief plants employed in the larger arrangements may be found serviceable. After that I will record, in brevity, the subjects which contrasted or harmonised to good effect in beds which have been viewed. The following is a list of plants suitable for sub-tropical beds, and employed generally for the sake of their graceful character and brightness:

#### FOLIAGE PLANTS FOR SUB-TROPICAL BEDDING.

|                                      |                                       |
|--------------------------------------|---------------------------------------|
| Abutilon Savitzi                     | Fatsia japonica                       |
| " Thompsoni                          | Ferula communis                       |
| Acacia lophantha                     | Ficus elastica                        |
| Acalypha Macfeeana                   | Glyceria aquatica, fol. var.          |
| " musaica                            | Grevillea robusta                     |
| Amaranthus superbus                  | Humea elegans                         |
| Areca lutescens                      | Iresine Herberti                      |
| Aralia (see Fatsia)                  | " Lindenii                            |
| Araucaria excelsa                    | Kentia Belmoreana                     |
| Artemisia arborescens                | " Fosteriana                          |
| Arundo Lindleyana                    | Latania borbonica                     |
| Asplenium bulbiferum                 | Ligustrum ovalifolium variegatum      |
| Beta chilensis                       | (Golden Privet)                       |
| Bocconia cordata                     | Melanthus major                       |
| Calocasia antiquorum                 | Musa Ensete and others                |
| Cannabis gigantea (Hemp)             | Oreocome Candollei                    |
| Cannas, various, red and green       | Palms, various, as named              |
| Coleus, various                      | Phalaris arundinacea (Gardeners'      |
| Cordyline australis                  | Garters)                              |
| " indivisa                           | Phlebodium aureum                     |
| Cornus alba Spathi                   | Phormium tenax                        |
| Cyperus alternifolius                | " " variegata                         |
| Dactylis glomerata elegantissima     | Phyllostachys mitis and others        |
| " variegata                          | Polygonum lanigerum                   |
| Dasylium Hookeriana                  | Prunus Pissardi                       |
| Eucalyptus citriodora                | Rhus typhina, small                   |
| " globosa                            | Ricinus communis                      |
| Eulalia japonica gracillima          | Ricinus Gibboni, &c.                  |
| " variegata                          | Sansevieria japonica (syn. Dracena    |
| Euonymus japonicus latifolius aureus | elliptica)                            |
| " " albus                            | Solanum Balbisi                       |
| " " radicans variegata               | Solanum pyracantha, &c.               |
| Eurya latifolia variegata            | Zea Mays variegata (variegated Maize) |

Some of the more tender of the foregoing are plunged out for only a little while in the height of summer and early autumn. Those, such as the Privet, the purple Prunus and others, are employed generally as two-year-old plants over very dwarf subjects to relieve the flatness, or they may be massed with other specimen plants. Some other suitable plants could be included, but the foregoing are the more popular at present.

In the succeeding list, as follows, are named those species and varieties which are appreciated for their style of growth, even irrespective of their flowering qualities.

#### PLANTS WITH FOLIAGE AND FLOWERS FOR DITTO.

|   |                                |
|---|--------------------------------|
| Abelia rupestris                          | Lantanas, mixed vars.          |
| Abutilon Golden Fleece                    | Lilium speciosum               |
| Agapanthus umbellatus                     | " Hurrisi                      |
| Alonsoa incisifolia                       | Lobelia fulgens grandifolia    |
| Bougainvillea glabra                      | Manettia bicolor               |
| Bouvardia Humboldtii corymbosa            | Nicotiana macrophylla gigantea |
| Cassia corymbosa                          | " sylvestris                   |
| Celosia plumosa, red and golden vars.     | Nierembergia gracilis          |
| Coreopsis tinctoria, for its gracefulness | Pelargonium citriodorum        |
| Erythrina crista-galli                    | " filicifolia odorata          |
| Francoa ramosa                            | " quercifolium                 |
| Fuchsias, numerous                        | " quinquelobum                 |
| Gaura Lindheimeri                         | " radiatum                     |
| Heliotropiums, various                    | " tomentosum                   |
| Hydrangea hortensis                       | Plumbago capensis              |
| " paniculata grandiflora                  | " alba                         |
| Lantana delicatissima                     | Streptosolen Jamesoni          |
|   | Swainsonia galegifolia vars.   |

These lists comprise most of the larger growing subjects, and though many other plants of similar character could be included with them, yet sub-tropical bedding (an arbitrary title to be sure) as I understand it, demands the use of plants which are not of common quality. In the case of the scented Pelargoniums, the names of some of which are given, the plants are generally specimens measuring 3ft to 4ft in height. The Fuchsias are frequently grown as standards, with umbrella-shaped heads; or they may simply be single-stemmed, with the lateral shoots kept well pinched in. In any case when any such plants are used, it is necessary to have them nearly of one size, and space should be allowed that light and air and rain may have free action on the dwarfier plants which are employed to carpet the bed. It may be further useful to arrange the mixed dwarf plants in the form of a list for ready reference, as follows:—

#### MIXED PLANTS USED IN GENERAL BEDDING.

|                                   |                                    |
|-----------------------------------|------------------------------------|
| Abutilon Savitzi*                 | Leucophyton Browni*                |
| " Thompsoni*                      | Lobelia fulgens                    |
| Alyssum maritima variegata*       | " " grandiflora                    |
| Amaranthus tricolor*              | Lobelias, various, dwarf           |
| Antirrhinum†                      | Marguerites                        |
| Begonia ascotensis                | Mesembryanthemum cordifolium va-   |
| " Corbeille de Feu                | riegatum*                          |
| " fuchsoides                      | Mimulus Harrisoni                  |
| " Laing's Rosy Red                | Panicum variegatum*                |
| " La Fayette                      | Pelargoniums, dwarf Zonal bedders  |
| " semperflorens gigantea          | " " dwarf scented                  |
| " " rosea                         | " " Ivy-leaved                     |
| " tuberosus†                      | " " variegated foliage             |
| " weltoniensis                    | Pentstemon barbatus                |
| Calceolaria amplexicaulis         | Pyrethrum " Parthenium Golden Fea- |
| " mexicana                        | ther*                              |
| " shrubby vars.                   | Salvia patens                      |
| Cannas                            | " " Selarea*                       |
| Celosias                          | " splendens                        |
| Centaurea candidissima*           | Stellaria graminea aureum*         |
| Chenostoma hispidum               | Stöcks, Brompton†                  |
| Cineraria maritima*               | Tradescantia tricolor              |
| Chlorophyton variegatum*          | Vertena Globe d'Or, golden         |
| Coleus, various*                  | " Miss Wilmott, rose pink          |
| Cuphea ignea                      | " " venosa, purple                 |
| " platycentra                     | " mixed                            |
| Dactylis glomerata elegantissima* | Veronica Andersoni variegata       |
| " " variegata                     | Viola Blue Diamond                 |
| Fuchsias                          | " Blue Bell                        |
| Galtonia candicans                | " Bullion                          |
| Gaura Lindheimeri                 | " Canary                           |
| Glaudiolus, mixed                 | " Countess of Kintore              |
| Gnaphalium lanatum*               | " J. B. Riding                     |
| Königa maritima                   | " Wm. Neill, &c., &c.              |
| Kniphofias                        |                                    |

Those marked with an asterisk (\*) are foliage plants. Those marked †, denote that distinct, named varieties are employed.

#### EDGING PLANTS FOR GENERAL BEDDING.\*

|                                  |                                    |
|----------------------------------|------------------------------------|
| Ajuga reptans purpurea           | Mesembryanthemum cordifolium va-   |
| Alternantheras, various          | riegatum                           |
| Begonia semperflorens rosea      | Pelargoniums, Ivy-leaved, trailing |
| Calceolaria mexicana             | vars.                              |
| Cerastium tomentosum             | " Harry Hieover                    |
| Centaurea candidissima           | " Black Vesuvius                   |
| Chlorophyton variegatum          | " Lady Plymouth                    |
| Cineraria maritima               | " Little Trot                      |
| Coprosma Baueriana variegata     | Pyrethrum Parthenium               |
| Cuphea ignea                     | " Golden Feather                   |
| Dactylis glomerata elegantissima | Sagina subulata aurea              |
| " " variegata                    | Saxifraga muscoides                |
| Funkias, several                 | " trifurcata                       |
| Leucophyton Browni               | " caespitosa                       |
| Lobelia, Brighton Blue, light    | " umbrosa                          |
| " Beauty of Darmstadt, Gen-      | Spergula (see Sagina)              |
| " tian blue                      | Stellaria graminea aurea           |
| " Granite City, white            | Veronica repens                    |
| " King of the Blues, indigo      | Violas in variety                  |
| " Swanley Blue, bright and deep  |                                    |

\* Many of these are used to carpet sub-tropical beds.

Appended is a short list of those neat growing plants generally employed in carpet bedding.

|                         |                            |
|-------------------------|----------------------------|
| Antennaria tomentosa    | Echeveria metallica        |
| Alternanthera amena     | " secunda glauca           |
| " amabilis              | " secunda pumila           |
| " magnifica             | Herniaria glabra           |
| " paronychioides aurea  | Kleinia repens             |
| " versicolor            | Leucophyton Browni         |
| Beet, purple seedlings  | Lobelias, various (pumila) |
| Champepence Cassabonae  | Mesembryanthemum           |
| " diacantha             | Pyrethrum Golden Feather   |
| Chlorophyton variegatum | Sagina subulata aurea      |
| Cordyline indivisa      | Solanum pyracanthum        |
| " lineata               | Sedum acre                 |
| Echeveria (Cotyledon)   | " anglicum                 |
| " glauca                | " glaucum                  |

—J. H. D.

(To be continued.)

#### South Africa.

Writing from Johannesburg, a correspondent says: "I am greatly astonished with this country. Vegetables and flowers are grand, and fruit trees do splendidly; only this is winter, the drought may change the effect in summer."

## An Evening with the Microscope.\*

(Continued from page 172.)

We will now say a little about insects, which furnish a vast field of study, whether examined in a living state, the live box, compressor, forceps, disk revolver, or mounted on slides whole or in parts. Many of them are interesting for their extreme beauty, such as the Diamond beetles, of which there are a vast number of varieties. They belong to the family Coleoptera, of which Messrs. Cassell tell us in their "Natural History," 80,000 species of Coleoptera have already been described. A vast number of them are most interesting to the microscopist, either as a whole insect, their wing cases, or parts of their wings. Equally beautiful are the wings and parts of wings of butterflies and moths. Many of their wings appear as though they were scales of a fish displaying most brilliant colours.

As regards the dissecting of insects, such as the tongue of a butterfly, the tongue of a hive bee, the tongue of a drone fly, the stomach of a wasp, the tongue of a spider, the gizzard of a cricket, the cornea of the eye of a moth, and other parts too numerous to mention; it makes one wonder how such minute portions can be extracted from an insect and mounted in a perfect state. We may also add the eggs of insects, particularly from those insects which are quite, or almost, indiscernible to the naked eye, and scores of similar things equally puzzling to the uninitiated microscopist.

We, as gardeners, are too well acquainted with our enemies, the green fly, the red spider, thrip, mealy bug, scale, weevils, woodlice, ants, cockroaches, American blight, and a host of others to require their identification with anything more than the pocket lens or the naked eye; but I have found a microscope of high powers very useful on many occasions. The first in particular, was when I was at Trentham with the late Mr. Stevens. We had a house of young Vines that began to look very sickly, and we were a little puzzled to account for it, as there were no insects on the foliage. The border was also in proper condition for moisture, but on examining the roots under the microscope we found them infested with the dreaded Phylloxera. They were as thick as they could possibly be on the roots, as fat and plump as a lot of aphides. The whole border was carted out and burned; the walls of the house, border and floor thoroughly washed down with hot lime and left open for a few days, when a second application of hot lime was applied, after which the house was brought into use again, and the enemy was found to be thoroughly stamped out. It was supposed to be imported by the purchase of a Vine of a new variety of Grape then being sent out; but the Vine in question was not sacrificed altogether. The wood was not ripe enough for ordinary grafting, so I suggested to Mr. Stevens to bud-graft the half-ripened wood on other Vines, which was done, and every one united satisfactorily. The shoot from each bud produced a bunch of Grapes the following year, but we were no longer troubled with Phylloxera. [This, I believe, was the first time that Vines had been bud-grafted in an unripened state.]

Many cases have since occurred when the use of the microscope has been of special advantage, but I will only mention the most recent one, a case of vermin infesting a Mr. Nash's Ferns. They were so minute that they looked like bits of dust on the fronds. My first impression was that it was fungus; Mr. Nash thought they were insects, and on closer inspection I found the edges and stems of the young fronds had the appearance of being eaten, and were disfigured and crippled; but when putting them under the microscope I found them to be badly infested with *Macrobatus Hufelandi*, a genus of Arachnidæ, described and figured in the "Micrographic Dictionary," also in "Cassell's Natural History." In the latter it is called the bear, or sloth animalcule. This insect enemy was entirely new to me as a garden pest, and it was followed by another one that had infested a lot of *Asplenium viviparum*, the crowns of which had a hardened appearance, and no perfect fronds developed, as they were all crippled and deformed. I cut a portion of the crown of a plant and found it infested with a totally different insect, which was, as far as I could trace it, the *Oribata demersa*, and was there in quantities. It is generally found on *Hyphium inundatum*. Both insects belong to the extensive class of Arachnidæ, which includes scorpions, spiders, mites, and ticks.

(To be concluded.)

\* Paper read by Mr. J. Ollerhead at a meeting of the Wimbledon and District Gardeners' Mutual Improvement Society, February 17th, 1902, the subject being again brought forward on March 17th, after a discussion on Roses in pots.



### Apple, Hawthorn Greening.

I have trees of this variety, a cooking Apple of medium size. I cannot find it named either in Hogg's Manual nor in the list of the Royal Horticultural Society; can you or any of your readers tell me if it is a well established variety or if it should be called by some other name?—A. C.

### Preservation of Hedges.

Gardeners and foresters often experience considerable difficulty in maintaining good hedges under the shade of tall trees. When Thorn hedges are employed for bounding woods and shrubberies, they generally get very gappy after the overhanging branches become so thick as to prevent much rain from falling on the soil beneath. A good deal of mending with stakes and rails then becomes necessary, till at last the patch-work becomes so unsightly that the old hedge is removed and a young one planted. If Whitethorn is used for the purpose, it is almost impossible to get good growth under such unfavourable conditions, and during my recent travels I have noted the generally unsatisfactory state of hedges bordering woods. A few days ago, however, I came across a perfect hedge growing under exactly the same conditions as others near which were of the usual gappy type. For a mile and a half, if not more, I rode beside a dense wood bounded by a hedge of Beech 4ft in height. It was so good that I could find no gap or thinness at any point, it was like a solid impenetrable wall of green. The plants had been set 6in apart. This hint may perhaps be useful to some readers during the planting season. In gardens where an evergreen hedge is required, Box would form a good substitute, as I know of no other evergreen which will succeed so well under trees. Although growth is slow, large bushes transplant so well that it is impossible to grow a good thick hedge at once.—H. D.

### Garden Cities through Co-operation.

Who has not heard of Cadbury's Chocolate? and the Garden City also bids fair to become equally famous as the artisans' model abode, thanks to the inspiration of its founder, Mr. George Cadbury. Large gardens, and a co-operative method of stocking them, are distinctive features of the model village of Bournville, and that the tenants of the Cadbury Trust make good use of the advantages which they have over other dwellers in the suburbs of Birmingham was shown at the recent annual exhibition of plants, flowers, fruit, vegetables, honey, and domestic handicraft, &c., produced on the estate. The remarks made by Mr. Cadbury, who opened the show, seem to me well worthy of being reported in your journal. Mr. Cadbury paid a compliment to the Tenants' Committee, which, he said, was well deserved, not only for the organising of the show, but for many other things for the good of the village. Something like £1,000 a year was contributed to from the village towards the District Council rates, and he suggested that the Village Committee could make an even better use of that money, if they could have it, than the District Council did, inasmuch as they knew exactly the wants of the village. Mr. Cadbury mentioned that at present the committee were testing the system of co-operative buying, by which they could secure plants cheaper, and added that possibly they might shortly be desiring the use of the railway siding to bring their coals on the same principle. Last year five of the inhabitants of the village kept careful account of the vegetable produce of their gardens, and the result was that the five produced on an average—one or two kept poultry—1s. 11½d. each per week. That works out at something like £60 per acre. When the land upon which they were gathered was simply pasturage, it was only producing an average of £4 per acre. Now if the gardens produced fifteen times as much food as the land produced when it was pasture, they were national benefactors, because they were helping to produce a supply of food in England itself, instead of having to go abroad to buy it. Another factor which Mr. Cadbury dwelt upon was the intense pleasure which many of the poorest children of Birmingham derived from coming to the village, and seeing the flower gardens, and some of whom had never before seen that miracle of Nature—the growth of the plant from the seed. He emphasised this side, because there was so little brightness and beauty in the home life of these children, that when they got an opportunity they simply revelled in the beauties of the flowers. A chief feature in the industrial



portion of the show was the large number of loaves of bread, jam tarts, jams, dressed and undressed salads, boiled Potatoes, and table decorations. Prizes were also offered for those who had the best kept forest gardens, generally in each road or lane, the gardens to be judged from January 1 to show day. Such a scheme as this surely deserves success?—W. G.

### A New Variegated Poplar.

I herewith enclose leaves of the new Poplar (*Populus Ontariensis variegata*). This grand variety was raised by Mr. John Carter, Willow Bank Nurseries, Keighley, Yorks, and he holds the entire stock. I had the privilege of inspecting the plants a few days ago, and may say that this new Poplar, with its large, blotched and variegated leaves, stood out with grand effect. The variety has been awarded a Silver Medal at Ghent, and an Award of Merit by the Royal Horticultural Society.—F. R. HAYES.—[The leaves are variegated with yellow. The larger ones measured 7 in in length by 5 in in breadth.—Ed.]

### The Golden Poppy.

As one who grows more of the Golden Poppy than he cares for, let me advise those who covet it to beware of letting it seed too freely. The Welsh Poppy, *Meconopsis cambrica*, as Mr. Woodward says, "does well in gardens, sowing its own seed around it," but, alas! one may have too much of a good thing, and one finds that it may become ubiquitous, and difficult to eradicate. Its roots go deeply into the ground, and even if the top is cut off or pulled away as deeply as possible, the plant has a Dandelion-like capacity for springing again. It is a splendid plant for the wild garden, but beware of introducing it among choice little flowers of the rockwork. The double form is good, and a proportion of the seeds come true to name. Very few people seem to know the orange coloured variety, a garden introduction of recent years. Some day, perhaps, we shall have white and scarlet varieties of what would then be a true perennial rival to the Iceland Poppies. By the way, some do not know that an easy way of distinguishing the *Meconopsis* from the Poppy lies in the long-shaped seed pods of the former as distinguished from the globular ones of the latter.—SCOTICUS.

### Cricket v. Gardening.

Tastes differ and opinions vary, but for my part, Oh! "Never Despair." I would rather have your subtle pen than the best bat that ever Grace—d all England. That demon delivery of alternate patting and punching, on page 175, quite bowled me out, and I stand confessed a sinner—the sin of omitting cricket from my curriculum for young gardeners. What do I think of cricket for young gardeners? Alas! not much, since, as a very young gardener at a home match (too near home), my left-handed batting put the ball through the home window, carrying away several small diamond panes (a pane—ful affair for me), part of the old-fashioned lead casement, and all the savings of a lifetime to pay damages. Then, too, a good hiding that I shouldn't forget. Forget? Forsooth, with the violated money-box staring me in the face. No, I don't think much of cricket, but the fact remains that it has proved to be a tower of strength to "N. D.'s" friend "H.," who is having a good innings through its influence. Truly, a gardener should be a man of many parts. It is unfortunate that it is, too, for gardening in itself is more than able to absorb an ordinary lifetime. Take consolation, "N. D.," that, if you are not an expert cricketer, it may be for years, and it may be for ever ere another is required to fill (?) the post of gardener. Possibly the next gardening plum will be snapped up by a sort of organist-choirmaster-gardener, or other such triple anomaly; and, of course, it is always just possible that a first-class gardener will be wanted, one who is simply that (and enough) and nothing more. That's where my boys come in, God bless 'em. I read my indictment with mingled feelings of pleasure and pain, for thou hast, my dear "N. D.," such a nice way of saying nasty things—nasty because they are true; but, as you will "probably have another turn at those triangles," I conclude that gardening is your first love, as it was mine, and that it will be our last love, too; hence, congratulations, with sincere hopes that you will get a good innings on your merits as a gardener alone. Truly, the head and front of mine offence is not having written to (or for) "the fellow who is out." That may be so—that is not as an Old Boy; but I have thought a lot, and said something to older heads on that head under other noms de plume. If I was a millionaire instead of a much-worried working gardener, it should be my first care to put precept into practice by a strenuous endeavour to mitigate the unmitigated evil. Oh for a golden magnet to draw the iron out of many a poor soul which has entered as deeply into mine as into those of most men; but it is a sore we like to keep "inwards," for all the sympathetic poulticing that draws it out will not remove it, hence, Cui bono?—AN OLD BOY.

### Gathering Tomatoes.

The advice which "W. R. Raillem" criticises on "Gathering Tomatoes," given by me on page 164 is not so wide of the mark as he implies. My advice referred to the outdoor plants which most people naturally wish to make the most of by not allowing the fruits to hang too long. The reasons might have been given, which are, that ripe fruits are subject to cracking if kept hanging when the plants are still being freely watered and fed for the benefit of later fruits. It is quite true that the perfect flavour of Tomatoes is best secured by gathering them direct from the plants when fully ripe. I have often recommended this method of acquiring a taste for Tomatoes to non-lovers of the fruit.—EAST KENT.

### Baths for Bothies.

I am pleased to read of your proposed prizes kindly offered for the best plan of a bothy; it will give our young men a chance who have studied drawing, and so made good use of spare moments. I would like to remind all who contemplate competing that one seldom sees a bath-room provided. I, therefore, earnestly trust all will put such in their plans. Unfortunately, this has been sadly neglected by those responsible at the time when many of our bothies were built, and, as a bath-room takes up so little space, I hope that all who can see their way to do so will add such a desirable compartment. I am sure all young men in a garden ought to be very clean and smart in personal appearance, and they may work better for the addition of a bath-room.—A. J. L., Tyfold Court Gardens, Reading.

### Gardening in the Transvaal.

It appears from a letter published in a Glasgow newspaper, from a gardener recently gone from there to fill an appointment in Johannesburg, that the look out for gardening is not so bad as one would expect, after a period of nearly three years of war in the country. The writer expresses surprise to find gardening establishments very little the worse of the ravages of war, and says that they are in much the same state as in this country. This state of things must be exceedingly gratifying to every one, and more especially to those who have already made up their minds on the question of sooner or later going thence in pursuit of their fortunes. That the home profession can well afford to spare a few is very apparent from the melancholy state of matters elicited by the letter of "Never Despair" in this week's Journal. There is an old saying, and we think it is full of wisdom, "If you have discovered that your existence in the Mother Country is one too many, emigrate; if not, stay at home where you will more likely prove the better citizen." Notwithstanding, we would seriously advise those who find the horticultural bands daily tightening, to make strenuous efforts to reach the paradisaical shores of South Africa. The letter referred to gives graphic accounts of the genial nature of the climate, and inferring from the rapid growth of things, little of the mental troubles, incidental to the home grower, need ever ruffle his happiness or tend to hasten his dissolution. Trees and shrubs planted only ten years, we learn from the writer, now stand from 30ft to 40ft in height. At the time of writing, being midwinter, Acacias of the same height were blooming profusely, as were also Roses, Pelargoniums, Peach trees, and countless other no less interesting plants. The frosts, if any, do not in the least injure them. Fruits of all kinds seem to be abundant; Oranges and Lemons cover the trees, ripen and waste. Vegetables grow well, much better than in Scotland. They comprise the usual class grown in every home garden. They are, however, very dear, for a Cabbage or a Cauliflower realizes from 1s. to 1s. 6d. in the market. This truly must be the heaven of the much-to-be-pitied market gardener. Gardeners there do not use the water pot, all watering being done by a species of irrigation. A water reservoir is placed in a convenient part of the garden, and from which, at pleasure, the water is conveyed in open drains all over the garden. These conduits are stopped where necessary, and the water rises and covers the ground. Food is, however, double what is paid for at home, and most other things are proportionately dear. The coolie makes a very good worker, and the Indian a very excellent cook. In consideration of such an outlet for the damped enthusiasm of the faithful genera who have been sedulously imbibing the mysteries of Euclid's self-evident truths and pons asinorum to boot, truly this is a fertile field for the full employment of all they have acquired to meet the exigencies of the triangular of a circular parterre or the squaring of a Cyclus. A marginless country like the fertile regions of South Africa—ought, we divine, conduce to every active or latent talent being fully and capably exercised. However, we may be tolerated to say this much, in the form of a rider. "Learn, learn ye devils, but dinna' get conceited, for sometimes it interferes with the bread and butter, and that is a bad look out for the wife and weens." The dingling sound of triangles and à sic unchristian,

not to say uncabbage-like learning, often though good enough in a small way, leads to a peculiar form of mental aberration, immensely inimical to the right about attention so necessary in the duly equipped practitioner in the art of gardening. Therefore, as poor simple minded Euclid would say, this requires no demonstration, it is a self evident truth.—KEPOUROS.

### Rose, Dorothy Perkins.

I recently noticed, amid a fine large stand of cut Roses on the stall of Messrs. Perkins and Son, of Coventry, in the Birmingham Market Hall, a bunch of this new American raised variety. It is a seedling from Wichuraiana (not Wichuriana as it is often mis-spelt) crossed with Gabriel Luizet. It has colour of Bridesmaid (a light pink), comes in large clusters, and the growth is that of Crimson Rambler, and sweetly scented. Mr. Perkins remarked that his plants of this new and desirable variety have made remarkably fine growth planted out in his nurseries this year. The flowers, which appear to be very persistent or durable, are produced until late in the autumn. Dorothy Perkins is said to be one of the best of the hybrid Wichuraiana Roses; such for instance as Alberic Barbier, Evergreen Gem, Gardenia, Jersey Beauty, Rene Andre.—G. [We thank our correspondent for directing attention to the name of Wichuraiana (pronounced Wish-ur-i-ana). In England the name is almost invariably spelt Wichuriana, but the Americans render it as Wichuraiana.—ED.]

### Hints for Show Committees.

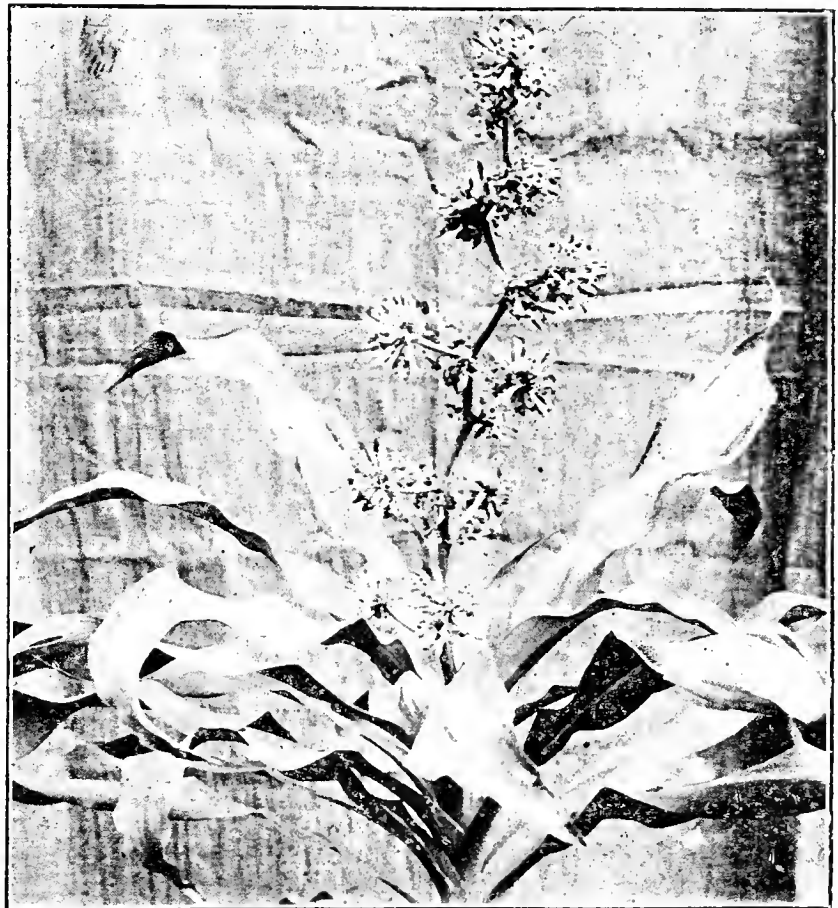
One of the most important aids to the reporting of exhibits is the ready accessibility of the names of the prizewinners and the schedule classification, and has been variously adopted by the compilers thereof. At the recent Shrewsbury Show, through carelessness or ignorance, many of the class numbers on the entry cards were pasted over by the prize slips. The stamping, also, of the prize numbers disfigures the cards, and often renders the words beneath indistinguishable. Such faults could easily be remedied by allowing a sufficient blank space at the bottom of the entry card to affix the prize slip or stamp, and the necessarily extra depth of the card would hardly be worth consideration. The name of the gardener, also, should be included, with the name of the employer and residence. The non-observance of this frequently applies to the minor shows, the secretaries forgetting that the dual inclusion is of equal interest to the employer, gardener, and the visitor, including assistance to the Press man. Another little matter worthy of attention is the usual practice of the judges, when marking the awards on the back of the cards, using an ordinary blacklead pencil, and I have frequently—so also have the officials whose duty it is to append the numbers of the prizes—experienced an unnecessary difficulty in finding the prize card, owing to the almost undiscernible pencil marking. To obviate this fault, when acting as a judge, I invariably use a large blue garden-label pencil, and was agreeably surprised, when judging at a recent local show, to find the astute secretary fortified with half-a-dozen of such pencils for the use of the judges. This is all the more worthy of mention, considering that he is the secretary of an entirely recently-established show.

In the preface to the report of the Shrewsbury Show in the *Journal of Horticulture* last week it was pertinently remarked that a point worthy of notice was the facility for competitors to find the exact spot whereon to stage their various entries, the printed entry cards being tacked down on the edges of the tables or other staging, thus rendering a commendable service to all concerned. But Shrewsbury generally leads. Another matter, though perhaps a small one comparatively, which is worthy of attention at shows, is the turning of the blank side of the whole of the entry cards downwards upon each exhibit after the adjudication is finished, and not, as too often is the case, leaving them during the exhibition in the position mentioned; and were an official "told off" by the secretary for the purpose indicated, it could be quickly effected. Yet another apparently small item in the arrangement of the various exhibits in their respective classes, is a distinctly defined divisional line, by a broad chalk mark or other suitable material, this being the more necessary where overcrowding of space occurs. For want of attention to this, judges have been known to commit excusable mistakes in judging the entries of another class or section. Lastly, though, doubtless, not exhaustively, the naming of the exhibits, as far as it may be possible, by the exhibitors should be insisted upon, both from an educational point of view and an aid to successful reporting. As an instance of the non-observance of this important matter, I noticed at a recent show about two dozen dishes of Peas, and a host of Potatoes, unnamed. As a remedy for this sort of neglect, probably a few "disqualifications" by the judges would have a potent effect. The non-naming omission is not confined to cottagers and amateurs, who may be comparatively new to exhibiting, but the professional

exhibitor is too often a sinner in this respect, and I have seen—for example—large collections of fruit totally unnamed. The foregoing notices and suggestions may be considered as trifles. Trifles, however, contribute to perfection, and perfection is no trifle. Possibly others may be induced to add to the above items.—BIRMINGHAM.

### Shakespeare and Horticulture.

It is a regrettable fact that the works of Shakespeare and kindred subjects are not more generally studied in the lodge of the young gardener than my experience of both life forces me to conclude. If, after a day's work, a youth can take up a volume of Shakespeare and read and enjoy its classical beauties, I feel sure his time cannot be more profitably employed. The occupants of our bothies should endeavour to gain a taste for high-class literature, and when this is once acquired, its gratification will be found much pleasanter, and certainly more advantageous, than bemoaning any defects which may be found in their temporary homes. It is surprising how a person of studious habits will adapt himself to his surroundings and resign himself to minor discomforts, providing he has access to his books. By this I do not infer that such a one is indifferent to domestic neatness and method; quite the contrary; for, having a naturally refined instinct, he will appreciate refinement in every aspect, yet will



*Cordyline australis* in flower.

(See page 196.)

solace himself by study should he be placed in objectionable environments, while some others will be discontented and irritable.

Year by year the price of good books diminishes, and the days of ignorance are vanishing. Time was when the young man of the working class had perforce to stand in silent awe before the public schoolboy, with his little Latin and less Greek; but now it is frequently possible to meet in comparatively humble walks of life a studious youth who can talk of the Greek heroes, and discuss the alleged difficulties of *pons asinorum* with the best of grammar-school scholars. Even if a youth has no taste for classic lore or Euclid, still it should, at any rate, be his aim to obtain a knowledge of the powers and possibilities of his native tongue, and to attain this end nothing is more helpful than the careful perusal of Shakespeare. That mighty intellect has exalted the English language to a height and majesty far above that of any other nation; he has tempered it in the fiercely hot passions of Othello and Shylock, in the white-hot demon-craft of the bloody Richard of Gloucester, and has moulded it to receive in Desdemona, Juliet, and Miranda some of the most beautiful conceptions of love and virtue that have ever been portrayed.

In this article I propose to notice briefly a few of the allusions of the Bard of Avon to flowers and horticultural matters. It must be pleasing to gardeners and botanists to know that our great national poet—nay, more, the master mind of humanity—has bowed before the charm and beautiful simplicity of the little wayside flower, and has spoken many times of horticultural techni-



calities in a manner which proves his wide knowledge and love of the art.

Different species of Roses are mentioned by the poet more frequently than any other flower. Two are referred to in that well-known speech of Oberon, in the "Midsummer Night's Dream," act ii. scene ii.:

I know a bank whereon the wild Thyme blows,  
Where Oxlips, and the nodding Violet grows,  
Quite over-canopied with luscious Woodbine,  
With sweet Musk Roses, and with Eglantine.  
There sleeps Titania, some time of the night,  
Lull'd in these flowers with dances of delight.

What a picture of sylvan beauty have we here! It is a portrait drawn to perfection; a bower meet indeed for a fairy queen. As we read, we almost fancy we smell the commingled perfumes of the dewy Woodbine and Roses, wafted on the gentle zephyrs of the midsummer night. On two most important historical occasions Shakespeare introduces the Rose finely. In "Richard III.," act iv., scene iii., speaking of the murdered princes in the Tower, Tyrrel says they were:

Girdling one another  
Within their alabaster innocent arms.  
Their lips were four red Roses on a stalk,  
Which in their summer beauty kissed each other.

The other place I refer to is the first part of "Henry VI.," act ii., scene iv. It is the quarrel scene in the Temple Gardens, from which sprang the terrible Wars of the Roses. Richard Plantagenet, Warwick, and Vernon have each plucked a white Rose, while Somerset and Suffolk have taken red ones. Then follows a dialogue of witty sarcasm, raillery, and defiance, the Rose serving the purpose both of sword and shield in the war of words. I quote the following as an example:

Somerset:  
Prick not your fingers as you pluck it off,  
Lest, bleeding, you do paint the white Rose red,  
And fall on my side so, against your will.  
Vernon:  
If I, my Lord, for my opinion bleed,  
Opinion shall be surgeon to my hurt,  
And keep me on the side where still I am.  
\* \* \* \* \*  
Plantagenet:  
Meanwhile, your cheeks do counterfeit our Roses,  
For pale they look with fear, as witnessing  
The truth on our side.

The Violet is mentioned many times, space forbidding more than one example. "Twelfth Night," act i., scene i.:

That strain again; it had a dying fall.  
Oh, it came o'er my ear like the sweet south  
That breathes upon a bank of Violets,  
Stealing and giving odour.

The Lily is often used as an example of whiteness and purity. "Midsummer Night's Dream," act iii., scene i.: "Most radiant Pyramus, most lily-white of hue." "Love's Labour Lost," act v., scene ii.: "Pure as the unsullied Lily." In the "Winter's Tale," Autolycus sings of Daffodils, and in "Cymbeline," Arviragus speaks of the "pale Primrose" and the "azured Harebell."

We will now notice a few of the fruits and vegetables introduced. In "Midsummer Night's Dream," act iii., scene i., the fairy queen says: "Feed him . . . with purple Grapes, green Figs, and Mulberries." The "Merry Wives of Windsor" has: "I will dance and eat Plums at your wedding." Shallow, in second part of "Henry IV.," inviting Sir John Falstaff into his orchard, says: "We will eat a last year's Pippin of my own grafting."

Shakespeare introduces the enemies of the garden with good effect. How admirable is the simile in "Romeo and Juliet," act iv., scene v.:

Death lies on her like an untimely frost  
Upon the sweetest flower of all the field.

Also that in "Henry VIII.," where Wolsey soliloquises on his fall:

This is the state of man; to-day he puts forth  
The tender leaves of hope; to-morrow blossoms,  
And bears his blushing honours thick upon him;  
The third day comes a frost, a killing frost,  
And

And then he falls, as I do, nips his root,

Hamlet, grown weary of life exclaims:

Fie on't! O, fie! 'tis an unweeded garden  
That grows to seed; things rank and gross in nature  
Possess it merely.

In "Richard III.," act iii., scene i., we read: "Idle weeds are fast in growth." Thus examples might be quoted indefinitely. In "Henry V.," act ii., scene iv., Shakespeare speaks directly of "gardeners," and in "Richard II.," act iii., scene iv., a small but characteristic part is written for a gardener.

The young gardener should therefore regard Shakespeare, not as a great genius whose works he dare not attempt to grapple with, but as a man whose thoughts and ideas of beauty, together with an inborn love of the garden, run parallel with his own. Then if a sympathy can be established with Shakespeare's inimitable manner of writing, the student will become more and more engrossed, and thus gain a familiarity with Shakespearean sublimities in their many forms; and familiarity with these cannot but tend to improvement, both morally and intellectually.—JOSEPH E. SIMMS, Astle Gardens, Chelford.

## Societies.

### Shropshire Horticultural, August 20th and 21st.

#### Non-Competitive Exhibits.

Mr. J. H. White, Nurseries, Worcester, arranged an extensive display of hardy flowers and foliage, the exhibit being well displayed.

Mr. A. Meyers, Shrewsbury, had Zonal Pelargoniums, arranged in crescents and in tubes, resembling great bouquets, with Eulalia, Gypsophila, &c., more beautiful in effect than we have ever seen this flower put together before.

From Messrs. W. and J. Brown, of Stamford, Peterborough, Grantham, and Oundle, came grouplets of choice greenhouse and hardy flowers. Heliotrope Lord Roberts is dwarf, and has massive flowerheads; Pelargonium Fire Dragon is now well known, and Alanchoe flammea as well. They had also Carnations, Phloxes, and Roses.

Mr. J. Russell, Richmond, also arranged a group of choice foliage plants, which were rather too crowded, no doubt owing to lack of room. Dracenas, Crotons, Alocasias, Aralias, and similar plants were chiefly employed, making a very bright mass of colouring.

Messrs. Pritchard and Sons, Shrewsbury, presented a novel exhibit of Davallias trained in all sorts of fantastic shapes; also a number of Larches trained as cranes, tortoises, &c. They presented a striking appearance in the groundwork of small Ferns.

Messrs. Smith and Co., Worcester, presented a very large group of plants and cut flowers. The Palms and Bamboos forming the background were attractive, while the masses of cut flowers were effective in their bed of greenery. A good collection of Phloxes and Gladioli were also noticed.

### R.H.S. of Perthshire.

The annual exhibition of fruit, flowers and vegetables, under the auspices of the Royal Horticultural Society of Perthshire, was held in large marquees erected on the North Inch (one of Perth's public parks), on August 21, 22 and 23. This society is one of the oldest, if not the oldest Horticultural Society in Scotland, having been established so long ago as 1805 [and Stirling?], and has during the long period of its existence done a vast amount of good work, and at the same time it has passed through many vicissitudes, sometimes enjoying prosperity, and sometimes not. At the present time it seems to be like the proverbial eagle, renewing its youth and soaring high. With a hard-working, courteous secretary, and an enthusiastic board of directors managing its affairs, a marked improvement has been observable in the annual shows during the past few years.

Despite the unfavourable character of the season experienced in this district, the show this year was of a highly satisfactory nature, the display from an artistic standpoint being perhaps much finer than on any occasion for a number of years back. At the entrance to the first marquee were displayed the bouquets, sprays and wreaths from florists, &c., and these made a magnificent and attractive exhibit. Miss B. C. Kidd, florist, New Seott Street, Perth, carried everything before her, showing a very handsome shower bouquet composed chiefly of Eucharis and White Lilies with long sprays of Asparagus. Her ladies' sprays were greatly admired, special notice being taken of one composed of beautiful Lily of the Valley, of snowy purity. The other prizetakers in this section were Miss Harris, Messrs. Wm. Farquharson, and Wm. Brown all showing beautifully. Taken all over, this was perhaps the strongest exhibit in this class that has been seen for years.

For the best display of cut flowers and foliage, four competitors entered. The judges awarded the premier ticket to Mr. Wm. Lowe, gardener to James Ramsay, Esq., Balhousie Castle; second, Mr. John Leslie, gardener to Mrs. Coates, Pitcullin; Mrs. McKendrick, Burnbank Terrace, securing third. Only one group of plants was set up; this came from Pitcullin, and was bright with highly coloured Crotons and Dracenas, interspersed with Palms, Schizanthus, &c. Table plants, 10ft by 5ft, brought out three competitors; here again Mr. Leslie scored an easy victory. Mr. J. Margaeh, gardener to P. W. Campbell, Esq., Murtonbank, was second, and Mr. Lowe, Balhousie Castle, third. Specimen plants were only very moderately shown, Messrs. Leslie and Margaeh being the principal winners.

In the cut flower department there was a wonderfully bright display, considering the unpropitious season, and in some sections competition was very keen. Sweet Peas were magnificent, those staged by Mr. Kennedy, Moness Gardens, Aberfeldy, which won him the medal, were exceptionally fine. Roses were much finer than they are usually seen at this date. Mr. Harper's stand was first-class, not a faulty bloom being among them. Pelargoniums, wrongly named Geraniums, were a strong class, there being no fewer than eight entries. The first prize was



*Erica mediterranea* at Glasnevin.

(See page 196.)

awarded to Mr. Wm. Little, gardener to Walter Low, Esq., of Ballendrick, Bridge of Earn, with large brightly coloured blooms. Begonias, Pansies, Stocks, Marigolds, &c., were all well shown.

For twelve bunches of annuals, distinct, Mr. J. McFarlane won in a strong class with a capital exhibit. Fruit was also well staged, especially Grapes. Here Mr. Leslie carried all before him, other winners being Messrs. Bain, Little, Margach and Lowe. Apples were poor, owing to the cold season, Mr. McFarlane winning for both dessert and kitchen varieties. Peaches and Nectarines were well shown by Mr. Leslie. Cherries, Gooseberries and Currants were plentifully shown, and of excellent quality.

For a collection of hardy fruit, eight varieties, three competitors staged, Mr. Harper, Tulliebelton, securing first place. Vegetables, as a whole, were not so fine as usual, although there were exceptions, notably the collection of ten varieties set up by Mr. Harper, which would have been hard to beat anywhere, everything being in the pink of perfection and beautifully staged. Unfortunately a railway accident happened the night previous to the show, whereby a special train conveying a quantity of side shows was wrecked. This will very materially affect the drawings at the gate, which is much to be regretted. —ALBYN.

### Aberdeen Horticultural, August 21st, 22nd, 23rd.

The annual three days' show of the Royal Horticultural Society of Aberdeen was opened in Central Park on Thursday last. Experts consider the quality of the exhibits remarkably good when the inclemency of the season is considered. The number of individual entrants was less than last year, but there are more exhibits. In the section for plants in pots open to professionals the honours were carried by Mr. Proctor, gardener to Sir William Henderson; Mr. Gregor, Fairfield Road House, Drumtochty; Mr. Douglas, Kepplestone House; and Mr. Sim, Glenburnie. In cut flowers the leading prizewinners were Mr. Johnstone, Port Elphinstone; Mr. Sim, Glenburnie; and Mr. Douglas, Kepplestone. In fruit A. Hutton, Montrose, and A. Howie, Drumtochty, were the most successful exhibitors; while for vegetables James Grant, gardener to Miss Chalmers, Rothiemoriman, and F. Kinnaird, Broomhill, Aberdeen, were first and second. Messrs. Croll, Dundee, were first for Tea and hybrid Roses, Messrs. Adam and Craigmyle, Aberdeen, being second. Mr. Kilgour, gardener to Mr. Webster, Edgell, was first for the best specimen plant in flower with a magnificent *Disa grandiflora*. Fruit, particularly Strawberries, shown in the working class section, is all over better than that in the amateur section. W. D. Kirton, Ellon, and John Grieve, Woodside, were successful in this department. Amongst the amateurs Messrs. Minty, Aberdeen, and John Miller, Aberdeen, took honours for cut flowers. There were some beautiful hand bouquets, and the medal for table decorations in the amateur section was gained by William Taggart, Waterloo Station, Aberdeen. The Earl of Aberdeen opened the show at noon, there being also on the platform Lady Aberdeen, Sir Allan Mackenzie, Lord and Lady Kilmarnock, and Principal Lang.

### R.H.S., Scientific Committee, August 19th.

Present: Dr. M. T. Masters (in the chair), Messrs. Gordon, Odell, Druery, Hooper, Saunders, Bowles, Worsley, Dr. M. C. Cooke, Revs. W. Wilks and G. Henslow, Hon. Sec.

*Lavender, improved*.—Mr. Wilks showed a spray of a new selected Lavender, having dark purple corollas and calyx. The scent was also stronger than that of the old form. He remarked that the white Lavender was devoid of scent. Mr. Bowles observed that this new kind was somewhat like the dwarf form of Lavender.

*Galls*.—Mr. Odell showed specimens of various galls on the following plants: *Poterium sanguisorba*, galled by *Eriophyes sanguisorbæ*; *Polygonum amphibium*, galled by *Cecidomyia persicariæ*; Oak, *Q. sessiliflora* and *Q. pedunculata*, galled by gallwasp, *Aphilothrix gemmæ*; *Salix fragilis*, galled by *Nematus gallicola*; bud galls on *Campanula glomerata*.

*Abelia rupestris* (?) *phyllotaxis*.—He also showed three stems of this plant having opposite leaves, whorls of threes and whorls of fours on separate shoots.

*Pyrethrum aureum* var. "Staghorn".—Mr. Druery exhibited a plant of this variety raised by Messrs. Storie, Dundee. It is characterised by a distinct tasselling or cresting of the main and lateral apices, precisely as obtained so frequently in Ferns. This form of variation is extremely rare in phanerogams; the only instance known to the exhibitor being the crested form of *Asparagus plumosus*, in which case it is correlated with extremely Fern-like foliage. In the *Pyrethrum* shown the leaves are distinctly pinnate, with stipitate pinnae precisely on Fern-lines, as are the terminal. It is stated to be so far fixed that 80 per cent. of the seedlings are true after five years' cultivation.

*Malformations*.—Mr. Corderoy sent examples of Wheat-ear, *Antirrhinum*, in which no flowers were present, but short branches covered with minute green bracts occupied their position. A Briar which bore a yellow variegated stem, but the leaves upon it were entirely green, an unusual combination for which no reason could be assigned. *Lathyrus latifolius* with green flowers. These apparently had received some check, so that although nearly fully formed, the flowers dropped. The stamens had full-sized anthers, which did not dehisce, the styles were arrested much below the anthers, and the stigmas were immature. As the flowers of Honeysuckle sometimes exhibit a similar appearance late in the season, it may be attributable to the late cold month of July.

*Silver-leaf disease*.—Mr. Worsley exhibited the grafted portion of the stem of a Peach or Plum showing the decayed condition of the centre. He observed that below the graft the dead part decreased by degrees downwards, till in the roots there was none. His impression was that the disease (sterium, according to Prof. Perceval) proceeds upwards and downwards. The specimen was sent to Prof. Perceval for further examination.

*Onions and caterpillars*.—Mr. J. Walker, Thame, sent some foliage, upon which Mr. McLachlan reports as follows:—"The larva is that of some Noctuid moth, and probably of *Mamestra brassicae*, which will feed on nearly everything, from Oak to grass. At the present time hand-picking, where the plants are attacked, would perhaps be best, or a good spraying with some of the paraffin preparations. Earlier in the year—say two months earlier—repeated spraying with arsenical or paraffin preparations might save the young plants. At this season the attacks will probably not do very much harm, as the Onions will be well on towards maturity. One can hardly prevent the depositing of eggs, because the moths fly from a distance; the thing is to preserve the young plants by rendering the foliage distasteful by means of spraying as before mentioned. Even this is uncertain, because the larvæ may move on to the Onions from some other contiguous crop that may have been gathered, such as Cabbage, &c." Some doubts were expressed as to the desirability of using arsenical preparations, in case it might be absorbed by the Onions, when eaten in the early stage.

*Physianthus and moths*.—Mr. Henslow exhibited flowering sprays of this plant from Cape Town, in which nearly every flower had retained a grey moth, by the proboscis having caught between the anthers, which are fixed to the stigmatic head in *Asclepiads*. They either died from starvation, or were picked off by bats, which are aware of their constant presence in these flowers.

*Pelargoniums with secondary tubers*.—In allusion to the illustration lately received of *Leucoium*, with secondary tubers below the first, Mr. Henslow showed specimens of small tuberous-rooted species from barren slopes of Table Mountain, in which similar secondary tubers were found below those from which the foliage and flowers proceeded. He suggested that they might be water-reservoirs in this particular case, as the plants were in full flower in the dry season. Such tubers occur in plants (as species of *Erodium*) in the N. African deserts.

*Phototropism*.—Mr. Henslow described an experiment to illustrate the effect of light in connection with gravity, &c. Mustard seed was grown on a thin layer of cotton wool, kept moist, on a perforated tin tray, suspended under an inverted flower-pot, raised upon a support so that the Mustard was illuminated only from below by means of a sheet of white paper. Gravity had no effect upon the germinating



radicles. If any protruded through the holes they at once turned back, and with all the rest were entwined in the wet wool. Hydro-tropism thus entirely superseded gravity. When the tin was suspended horizontally, the hypocotyls with the green cotyledons curved downwards; those on the circumference, being more strongly illuminated, curving more rapidly than the cluster in the middle. When the tin was suspended vertically, after two or three days all the seedlings curved downwards in the direction of both light and gravity, phototropism overcoming negative geotropism, or apogeotropism. These terms, of course, only describe the movements of the hypocotyls as "towards the light," or in "opposition to gravity," or "away from the earth." They are not "forces." The experiment suggested the possibility of different degrees of illumination being the primary influences in causing the upward growth of the stem and the downward growth of the root. It may be remembered that aerial roots of Ivy protrude on the less illuminated side, irrespective of gravity. So, too, the radicle of Mistletoe grows towards the bough on which the seed is fixed; so that as the direct light from the sky is greater than the reflected light from the soil, the shoot-end of a plant grows upwards and the root-end downwards. Gravity, however, is believed to act upon the root-tip, as Darwin and Dr. Francis Darwin explain, unless it be overcome by the presence of water, manure, &c. The stem, by growing upwards in opposition to gravity, puts out mechanical tissues to support itself under the influence of gravity, which always tends to pull it down, and has acquired a permanent tendency to rise, as shoots laid horizontally will rear their tips perpendicularly if kept in total darkness. Similarly, it is presumably possible that the root-tip has become sensitive to gravity as a secondary effect. As far as the germination of spores can throw light upon primitive conditions, it has been found that the first cell-plate laid down in the unicellular spore of Ferns and Equisetum is approximately in a plane at right angles to incident light, and that the most illumined half lays the foundation of the stem. Again, the dorsiventrality of the prothallium of a Fern, and the development of the rhizoids upon the under side, are determined by different degrees of illumination, and not by gravity.

### Goole, Yorks, August 14th.

A successful show was held by the Goole Agricultural and Horticultural Society on Thursday, August 14. Mr. W. Curtis, gardener to J. Blacker, Esq., Selby, led in class 2 for a group of plants, the second and third awards going respectively to Col. Harrison Broadley, and Messrs. Simpson and Son. The colonel was foremost for a dozen distinct stove or greenhouse specimen plants. Amongst other exhibitors who contested successfully were Messrs. G. H. Shaw, of Howden; R. Creyke, Rawcliffe Hall; and F. B. Grotian, of Hessle. Fruit and vegetables were fair. Mr. Creyke (gardener, Mr. D. T. Millar), contributed the finest sets of vegetables, and also did well in the fruit section. Mr. Shaw, of Howden, won first place for a collection of outdoor fruit, Mr. Creyke being second. Lady Beaumont (gardener, Mr. Nicholls), as usual, figured well in the prize list. The judges were.—Plants and flowers: Mr. G. Wilson, Swanland Manor; Mr. G. Taylor, Byram Hall. Fruits and vegetables: Mr. H. Butcher, Arksey Hall; Mr. A. Brooks, Womersley Park. Some trade exhibits were also on view.

### Trowbridge, August 20th.

The fifty-third consecutive and successful exhibition of this Society was held on the above date, and though the morning was stormy and threatening, fine weather afterwards drew the usual crowd of visitors. Being centrally situated, the high standard of the show is maintained because of easy access, more than because of the liberality or progressive spirit of the executive.

Fuchsias, for which the show is famed, were, if anything, in finer form than last year, and the specimen flowering plants surpassed in some degree previous records; while foliage plants, Ferns, Caladiums, Coleus, Gloxinias, table plants, and Zonal Pelargoniums contributed in their wealth and variety to what was unanimously considered a fine show.

Mr. Matthews, gardener to W. J. Mann, Esq., won in each class of flowering specimens respectively, nine, six and three. *Ixora Pilgrimi*, *Erica Eweriana elegans*, *Clerodendron Balfouri* (very fine), *Allamanda nobilis* and *A. Williamsi* were particularly striking plants. Mr. George Tucker won second prizes with the two first-named, and Mr. Helps, gardener to E. H. Atchley, Esq., with three plants. Mr. George Tucker's Fuchsias were models of good culture, though in the class for six he was followed closely by E. T. Foxcroft, Esq., Hintin Charterhouse. The plants stood from 8ft to 9ft high, beautiful and even in growth, also very fresh. Western Beauty, Brilliant, Final, Charming and Doel's Favourite were some of the best kinds.

Twelve Ferns made a capital display, three competitors demanding a large space. Mr. Tucker maintained the lead which he has held for so many years. Messrs. Stokes, Hilper-ton, were second, and A. P. Stancomb, Esq., third. Foliage plants from the late Sir Roger Brown's garden were on this occasion surpassed by those from Rood Ashton, Colonel Vivian's,

brightly coloured Crotons aiding him in his victory. Messrs. Cole and Son, Bath, being third.

Roses were finely represented by Messrs. Perkins and Son, Coventry, who won with thirty-six varieties, twelve triplets, twenty-four distinct, and twelve blooms. Messrs. Townsend and Son, Worcester, and Messrs. Cooling and Son, Bath, being other successful exhibitors. The latter won with Garden Roses, though run closely by Messrs. Townsend.

Dahlias were, for the season, well represented. Messrs. G. Humphries, Chippenham; J. Cray and Sons, Frome; and T. Carr, Esq., Twerton, were to the front in the several classes. Space does not permit of fuller details, though the many representative classes deserve mention.

As with other shows now past, Fruit was thinner than usual, due to the adverse season. Quality, however, was not wanting in several of the principal classes. For ten dishes, Mr. Strugnell, gardener to Colonel Vivian, was first, and also in that for six varieties, staging fine samples of Sea Eagle Peaches, Humboldt Neectarines, Melons, Figs, Apricots, and Grapes, with Madresfield Court and Muscat of Alexandria. He also won with black Grapes in two classes. Mr. H. Jones, Bath, and Mr. Helps, Rodwell Hall, Trowbridge, following, also with good fruit in collections and Grape classes. Peaches, Neectarines, Apricots, Plums, Melons, and Apples were numerous staged, and all good. Some uncommonly good Jefferson Plums were shown by Mr. Cutter, Frome; and outdoor Green Gages, from E. F. Bousanquet, Esq., Steeple Ashton, were ripe and well coloured.

Vegetables, both open, amateur and cottage grown, were, as is always the case at Trowbridge, extensively displayed, and the quality throughout excellent. Prizes are offered by Messrs. Sutton, Reading; Toogood, Southampton; and Webb, Stourbridge, in addition to that of the society for collections varying in number, each and all bringing out keen rivalry; but the competition for special prizes offered for cottagers afforded the judges the greatest difficulty by their extent and quality.

There were three competitors in decorated dinner tables, a new and very pleasing departure in the society's schedule. In this Messrs. Cole and Son, Bath; and Mrs. Woodland, Frome, won with effective taste the prizes offered. Messrs. Perkins,



Pear, Marguerite Marillat.

Coventry, took first prize for shower presentation bouquets. The Frome Flower and Fruit Co. won with bouquet of Sweet Peas and two buttonhole bouquets. An epergne of fruit and flowers found an easy winner in Messrs. Cole, of Bath, as also did that for a bowl of Roses.

Mr. G. E. Snaihum, with characteristic tact, conducts the secretarial duties of this old-established society, assisted by a strong committee, composed entirely of tradesmen of the town. The addition of a little more garden element in the constitution of the society would add materially to the management on show day, as well as in the schedule.

### Birmingham Gardeners'.

The Birmingham and District Amateur Gardeners' Association held its second annual summer show at Bristol Street Board Schools on Saturday evening, the 16th inst. The exhibits reflected much credit on the members, and justified them in their opinion that, given a fair field, the amateur can more than hold his own. The society was formed ten years ago with a view of encouraging gardening amongst amateurs; to-day there is a membership of over 200. This total bids fair to show a very large increase within the next few months, as the aims of the association appear to be more than ever appreciated. It should be remembered that the exhibition is purely for the amateur, the association's motto being "An Amateur Show for Amateurs." There were ninety exhibits, the Sweet Peas and Carnations being exceptionally fine. The table centres and Table Decorations were also well shown.

An innovation was made this year by inviting local nurserymen to send honorary exhibits. Mr. J. H. White, Worcester, brought down a splendid collection of herbaceous and other cut blooms, for which he was rightly awarded a Silver Gilt Medal. The display contained upwards of 100 bunches, besides a tray of twenty-four Cactus Dahlias. A number of the members also put up exhibits not for competition. Especial mention should be made of some faultless Carnation blooms shown by Mr. W. H. Twist, Yardley; a collection of fruit and Violas, shown by Mr. G. F. Kent, Wylde Green, and a collection of cut blooms, containing some very fine early Chrysanthemums and Stocks, shown by Mr. S. Coney, Monument Road, to each of which a Silver Medal was awarded. Mr. F. Wright, King's Norton, also gained a Certificate for a tray of six Roses.

The show was opened by the president, Mr. Councillor Wm. Davis, J.P., at 5.30 p.m., who congratulated the association upon the magnificent display of blooms. In the course of his remarks he said it was a pity such a beautiful show was held in such un congenial quarters, and was of the opinion there were a number of gentlemen in Birmingham who would be only too pleased to allow the association the use of their grounds for such an occasion. This, he thought, would be infinitely preferable to having a show indoors in the middle of the summer.

The following were amongst the principal prizewinners:—Groups of plants: First, Mr. W. A. Sarsons; Carnations (white grounds and selfs): First, Mr. Herbert Smith; second, Mr. W. H. Twist; third, equal, Messrs. C. W. Clarke and A. L. Wadley. Yellow grounds: First, Mr. W. H. Twist; second, Mr. Herbert Smith; third, Mr. C. W. Clarke. Sweet Peas (four bunches): First, Mr. C. W. Clarke; second, Mr. G. F. Kent; third, Mr. G. Fox-Allin; and for nine bunches do., First, Mr. W. A. Sarsons; second, Mr. A. L. Wadley; third, Mr. J. E. Muston. Annuals: First, equal, Messrs. J. E. Muston and A. L. Wadley.

For an arrangement of cut blooms: First, Mr. G. F. Kent; second, Mr. W. H. Edwards; third, Mr. W. A. Sarsons. Table centre (ladies): First, Mrs. Muston; second, Mrs. T. Powis; third, Mrs. T. L. Griffith. Perennials: First, Mr. Kent; second, Mr. Wadley. Begonias in pots, Mr. Sarsons; Cucumbers, Mr. Fox-Allin; Tomatoes, Mr. G. Sleath; Window Plant, Mr. Kent; Phlox, Mr. Wadley, and Perennials, Mr. Wadley.

### Pear Marguerite Marillat.

This Pear, which is of French origin, was introduced into this country some years ago, and is now sufficiently well known to be regarded as one of the most valuable varieties for September and October use. In appearance this Pear is decidedly handsome. The colour is clear lemon yellow with very numerous pale brown spots of russet and occasional patches of similar colour. The deeply set, medium sized eye has stout incurving segments, and is surrounded by a large patch of light brown russet. The very stout stalk, about  $\frac{3}{4}$  in. long, is set on the side of the fruit, and its fleshy base is encircled with thin russet. The cream coloured flesh is firm, with a faint suspicion of grittiness, and a slightly musky aroma. It is very juicy and rich in flavour. Marguerite Marillat has grown rapidly in public esteem, and its popularity will increase immensely as its undoubted merits become fully recognised. A number of fine specimens were included in the fruit collections last week at Shrewsbury.



### Fruit Forcing.

**PEACHES.—SUCCESSION HOUSES.**—Trees that ripened their crops in July will have the buds plumped and the wood sufficiently ripened for removal of the roof lights by the early part of September. This is sometimes desirable when the buds become too prominent, and tends to counteract the tendency to over-maturity of the buds or their premature development, alias falling, by affording the trees the benefit of rains and of night dews, the border becoming thoroughly soaked right through to the drainage by the autumn rains, which invariably has an invigorating effect on the trees, and in the preservation of the buds from dropping. It does not answer, however, to remove the roof lights until the wood is well ripened, but over-maturity of the buds is a greater evil than a moderate degree of prominence.

**TREES THAT RIPENED THEIR FRUIT** this month should, as soon as the fruit is cleared, have the wood that has carried fruit, not being extensions, cut away, and any wood not required for next year's bearing or for the extension of the trees also removed. Weakly and exhausted parts ought, as far as possible, to be cut out and the younger growths given advantage of their place. This will keep up a succession of bearing wood capable of producing large fruits, admit of the freer access of light and air, and of the cleansing of the foliage by water, or an insecticide if necessary, it being important that the foliage be continued in a healthy state to as late a period as possible, for the perfecting of the buds and the maturity of the wood. Air should be admitted to the fullest possible extent. If, however, the trees are not ripening their growths well, keep the house rather close by day, and throw it open at night, which will check the tendency to late growths, and ensure maturity of both wood and buds. There must not be any lack of moisture at the roots, giving a good watering if necessary, or trees that are weakly will be assisted in plumping the buds and storing nutrient matter with liquid manure, not, however, in too powerful doses.

**TREES RIPENING THEIR FRUIT** will need water at the roots, and moisture must not be withheld from the atmosphere; an occasional damping of the floor or border, especially on fine days, being necessary for the maintenance of the foliage in health. If the weather be cold and wet a genial warmth in the hot-water pipes, especially by day, so as to admit of a circulation of air, will be necessary for the satisfactory ripening of the fruit. A temperature of 60deg to 65deg at night, and 70deg to 75deg by day will be sufficient in order to keep the fruit in a steady progress of ripening, air being afforded more or less constantly. If the fruit ripens too rapidly, as may be the case if the weather proves very bright, a shading over the roof lights of a single thickness of pilchard net, or a double one of herring net, will break the fierce rays of the sun, and not only retard the ripening, but ensure the fruit finishing more satisfactorily than when exposed to the direct rays of the sun.

—ST. ALBANS.

### The Kitchen Garden.

**SPINACH.**—Autumn sown Spinach, when it stands well through the winter, provides an early crop of fine and succulent leaves earlier in spring than it can be obtained from a spring sowing. Also in the autumn some pickings are possible, but this is a matter of minor importance, as it is only desirable to reduce the plants so that they do not touch or unduly crowd one another. Select an open piece of ground, fairly rich and moderately firm. Draw drills 1 in deep and 12 in apart. This distance between the rows affords ample room for hoeing and cultivating, so as to promote vigorous growth in spring. The winter, or prickly variety of Spinach is very hardy and usually considered the best to sow at this season, though some prefer the round, or summer variety. It is a fact that Victoria Improved Round is suitable for either spring or autumn sowing, being quite as hardy as the prickly, and will come into use in advance of the latter. It produces dark green, broad thick leaves, therefore this texture renders them less liable to injury during the many and frequent changes in temperature. It is well to include both varieties, because if one is better than the other, a convenient succession is secured. The present sowing may be considered a main sowing, but several others should follow, as it is not certain which will prove the most serviceable for a forward spring crop.

**CABBAGE AND COLEWORTS.**—If seedling plants recently pricked out have strengthened sufficiently to lift with tufts



of fibrous roots with or without soil attached, the final planting may be carried out. The rows should be 2ft apart, and the plants can, if plentiful, be placed 1ft apart, with the intention of taking out every other in spring for planting elsewhere or cutting early. Rosette Coleworts come in useful also for planting as a supplementary crop, that is, instead of utilising the whole of the space with Cabbage, employ Coleworts, one of the latter between two of the former, all being 1ft apart.

**SOWING LETTUCE.**—A last sowing of Lettuce should be made, selecting a dry, sheltered border having well drained soil. Draw drills 1ft apart,  $\frac{3}{4}$ in deep, and sow thinly so as to encourage sturdy plants from the first. Of the Cabbage varieties Hammersmith, Hardy Green, and All the Year Round are good; while of the Cos Lettuces, Hicks' Hardy White Cos, and Bath or Brown Cos, are excellent.

**PLANTING LETTUCE.**—A good breadth of strong seedlings from an earlier sowing ought now to be planted out. On damp and heavy ground they are certain to succumb, therefore select a light and well drained position, inserting them in rows about 15in apart, the plants 4in to 6in asunder.

**ONIONS.**—Should the summer crop of Onions not yet be harvested, it is advisable that the first opportunity be seized to pull them up. In dry, settled weather they might remain on the ground, or preferably be placed on mats until the outer skins are thoroughly dry. Failing weather of the proper character, convey them under cover and allow them to finish with the assistance of plenty of air. Arranged thinly in boxes or on mats it will be possible to give them the benefit of sunshine by placing them outside on fine days.

**POTATOES.**—Embrace every available opportunity of lifting Potatoes, sorting, drying, and storing them. A bulky crop of tubers may be stored in clamps in a sheltered, well drained corner. As far as possible discard all diseased tubers, as sooner or later they will contaminate the rest. Some good new varieties were shown by Messrs. Dobbie at Shrewsbury.

**CELERY.**—The early crops will now be in demand for use. If the soil is carefully removed down to the roots on one side, lifting is rendered easier. Continue the earthing up finally of successional rows. Dry weather, when the soil works crumbly, is the best period. Successional or late plants still in growth may be helped with liquid manure. Chop down a little soil on each side the rows as a preliminary earthing.—EAST KENT.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.            | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|                  |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                  |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.<br>August. |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ...17     | S.E.               | deg. 62.9               | deg. 60.2 | deg. 67.0 | deg. 59.0 | Ins. 0.17   | deg. 63.5                             | deg. 60.5      | deg. 57.7      | deg. 57.8                    |
| Monday ...18     | W.S.W.             | 64.7                    | 60.7      | 66.0      | 57.2      | 0.86        | 62.5                                  | 60.7           | 57.8           | 51.0                         |
| Tuesday ...19    | W.                 | 65.9                    | 61.6      | 72.1      | 58.6      | 0.16        | 62.3                                  | 60.5           | 57.9           | 55.6                         |
| Wed'sday 20      | W.S.W.             | 58.4                    | 54.2      | 67.5      | 49.2      | 0.01        | 62.5                                  | 61.0           | 57.9           | 41.9                         |
| Thursday 21      | W.S.W.             | 59.6                    | 53.7      | 68.0      | 48.2      | —           | 61.5                                  | 60.8           | 57.9           | 40.2                         |
| Friday ...22     | S.S.E.             | 62.9                    | 57.5      | 73.3      | 45.8      | 0.02        | 61.3                                  | 60.8           | 58.1           | 39.8                         |
| Saturday 23      | S.W.               | 61.4                    | 59.7      | 66.9      | 55.2      | 0.18        | 62.5                                  | 60.9           | 58.1           | 48.2                         |
| MEANS ...        |                    | 62.3                    | 58.1      | 68.7      | 53.3      | Total. 1.40 | 62.3                                  | 60.7           | 57.9           | 47.8                         |

Dull cloudy weather has prevailed during the past week. Rain fell on six days, the greatest quantity falling on the 18th.

### Hardy Plants at Kew.

In the rockery, the Royal Garden, Kew, we notice a new Forget-me-not, *Myosotis azorica*. It grows half a foot high, is close, erect, and rather sturdy. The leaves are hispid and like those of the Mouse-eared *Stellaria*. The flowers, which are large, are deep violet-purple in colour. It was received from Messrs. Barr in February of this year. *Anemone japonica* Lady Gilmour, with its large and heavily crested foliage, furnishes another handsome subject in the rockery. *Dianthus laburnicus* Knappi, with very bright primrose flowers the size of a sixpence, is interesting. The segments are finely serrated. It grows 1ft in height, and is half erect.



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

### Plan of a Bothy—Competition.

"Well-wisher" promises a first prize of £3, and the Editor supplies a second prize of £1.

The rules of the competition are as follows:—The plan, drawn to scale, must not exceed 7in broad by 7in deep, and must be clearly defined on stout paper. The plan must provide suitable accommodation for six men, and the cost of the building ought not to exceed £200 to £220. A statement of the general items of cost should accompany the plans, together with any written comments thereon. The competition is open until Christmas, 1902, by which date all plans must be in the hands of the Editor. The sender's name and full address should be enclosed when sending the plan, and the sender will alone be held responsible for it.

**BOOK WANTED** (A. W. B., Northumberland).—The handbook, "Garden and Grounds, How to Lay-out and Arrange," has been sent to you.

**TRICYRTIS HIRTA WITH BROWN SPOTS ON LEAF** (S. N.).—The spots are caused by the *Sclerotinia* that infests *Lilium*, especially *L. candidum*. The ascigerous condition of the fungus is not yet known. It is certain, however, that the sclerotia are formed in the diseased tissues, hence the removal and burning of these is a good means of prevention. Probably spraying with a solution of sulphide of potassium, 1oz to 3gals of water, first dissolving the sulphide in a quart of hot water, and then making up to 3gals with cold water, would arrest the disease, and if resorted to sufficiently early prevent it.

**PREPARING GROUND FOR GARDEN** (Bucks).—The land being at present overgrown by Bracken and small Brambles, it would be advisable to stub up these now or as soon as convenient by means of a mattock or drag hoe, grubbing up the Brambles and pulling the rootstocks and roots clean out of the ground, as every portion of large root left would probably push growth, and the rhizomes of the Brackens should also be cleanly removed from the soil, taking advantage of the opportunity to extract all tap-rooted weeds, such as Docks, Dandelions and Plantains, with any creeping or stoloniferous grasses, throwing the whole on the surface to dry, and when sufficiently dried and freed as much as possible from soil by knocking about, collect into small heaps and burn the whole thoroughly, not leaving any matter unconsumed. Afterwards scatter the ashes evenly over the ground, and then bastard trench it, breaking up the spit of soil below with a fork, or if necessary a pick, but do not bring it to the surface. A trench should be taken out 2ft wide and 1ft deep, first paring off the surface an inch or two in depth, and placing these separately at the other end of the ground. Break up the bottom of the excavation, and if the soil be of a poor or stubborn nature, add some half-rotten manure, say a dressing 2in or 3in thick, and mix with the soil in breaking up. Next pare off the next breadth marked off by line 2ft wide, and place it on the broken up soil in the trench, and on it the soil a spit deep, breaking up the bottom of this trench, and so proceed to the other end, filling the last trench with the material taken from the first. The sooner this is done the better, and when completed the ground may be top-dressed with a mixture of 32 parts basic cinder phosphate and 12 parts kainit, mixing well and applying 14lb of the mixture per rod. As the surface will be rather rough, leave the dressing until February, or as soon after as the ground is in good working order, then fork over, taking small spits so as to mix or break up the soil, a coating of well rotted manure having been placed on the ground during frosty weather, at the rate of 2½cwt. per rod. In the course of a short time the ground will be fit for planting or sowing. By placing the surface a spit deep it will not interfere with cultural operations, and by breaking up the bottom the staple will be considerably bettered. A dressing of nitrate of soda, 1½lb per rod, at time of sowing or setting crops would be an advantage, but it must not come into direct contact with seed or roots.

**GARDENING APPOINTMENT IN THE UNITED STATES** (Artus).—Really good gardeners, and especially those who are able to do two days' work in the space of one, will doubtless succeed in the United States. Reports as to the chances and opportunities there, vary. One says "Come, there are situations and high wages for all." Another will tell you that there are plenty of gardeners only getting the equal to £1 per week. Certainly the demand for private gardeners, and especially landscape gardeners and all connected with their work, is growing in America, according to report; and this must necessarily be so, as the country becomes older and country estates come into being. The country is in its infancy in that respect. You could write to Meehan and Sons, of Germanstown, Philadelphia, who would possibly supply the proper advice. Why not consider British colonies first?

**CUTTING BACK STEPHANOTIS (J. L.).**—The plant trained over the roof of the stove with long naked wood several yards and lengths should be cut back by degrees, shortening the longest to the next successional growth below and so on towards the lower part of the plant, which will have the tendency to cause some of the latent buds to start even in the bare wood, and by continuing this procedure from year to year the plant may be kept furnished with young flowering growths from the base upward. This is simply a matter of judicious shortening and thinning so as to keep up a succession of flowering wood without a break in the supply. If cut in close there is a certainty of loss of bloom, and probably not starting exactly where desired, though we have cut hard back and secured growth from old wood, there usually being some eyes remaining dormant.

**SMALL AUTUMN AND SPRING ONIONS (G. N.).**—The Onions are quite sound in both cases, and there is no trace of disease, though the roots appear as you say, to be eaten away, yet no evidence of this having been done by wireworm or other root pest. It is likely there is something amiss with the soil. A dressing of well rotted farmyard manure, however, ought to give better results. If you can command wood ashes apply  $\frac{1}{2}$  bushel per rod, and dig in lightly in the autumn. Give a light dressing of very short thoroughly rotted manure in early spring, say  $1\frac{1}{4}$  cwt. per rod, and  $3\frac{1}{2}$  lb of a mixture in equal parts of basic cinder phosphate and superphosphate of lime, and point in lightly, it being important that the Onions have firm ground, sowing in due course. When the young plants begin to grow, give them a top-dressing of nitrate of soda, finely crushed, at the rate of  $\frac{3}{4}$  lb per rod, and continue these applications of the nitrate about every three weeks until the crop is about half grown. In the case of autumn sown Onions the nitrate should not be applied until spring. Failing the wood ashes, apply  $3\frac{1}{2}$  lb basic cinder phosphate and  $1\frac{1}{2}$  lb kainit per rod in the autumn and dig in, and before sowing the seed in spring, broadcast  $1\frac{1}{2}$  lb per rod of superphosphate, and  $\frac{3}{4}$  lb per rod nitrate of soda.

**MUSCAT GRAPES DISCOLOURED IN SKIN (W. H.).**—The berries are what is known as rusted. This affection of the cuticle or skin is usually caused whilst the skin is young and tender, about thinning time, and disfigures them even when ripe. Handling the berries or brushing them with the hair will cause rust, but the chief cause of rust is cold currents of air, especially when it occurs in the early stages of swelling. The discolouration of the skin of your berries, however, appears to have occurred at a later period, and may have been caused by fumes of sulphur, sometimes had recourse to for destroying red spider, the sulphur being applied to hot-water pipes. We have also known fumigation with tobacco paper to cause rust in Muscat Grapes, and this probably from the article containing a small quantity of sulphur or other substance in fumes acting prejudicially on the skin of the berries. Vapourisation with nicotine compound also injures the cuticle of Muscat Grapes, as well as damages the foliage. We have known Muscats practically ruined by the use of solutions for the destruction of red spider. We mention these as there has been some injury to the skin: at least, we do not find any trace of disease, and we may further say we have known such injury to arise from the use of stable manure, not properly sweetened, as mulching, and even from ammonia vapour given off by guano and other fertilisers, and from strong liquid manure, the house being kept close.

**NAMES OF FRUIT.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. H. C.).—1, Nectarine Oldenburg; 2, Lord Napier.

**NAMES OF PLANTS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (C. G. T., Kent).—White flower, Galtonia candicans; yellow one, Melilotus suaveolens; the other is an Iris, but please send when in flower. (T. J. R.).—Conifers received, will be named next week. (N. T.).—1, Veronica Traversi; 2, Cimicifuga racemosa; 3, Limnathes Douglasi; 4, Clerodendron splendens; 5, Begonia incarnata. (F. K.).—1, the Reed-Mace, Typha latifolia; the true Bull-rush is Scirpus lacustris. (M. T., Hamilton).—1, Polygonum Bistorta; 2, Gentiana sp.; 3, Polemonium caeruleum.

## Covent Garden Market.—August 27th.

### Average Wholesale Prices.—Fruit.

|                                     | s. d. | s. d.  |   | s. d. | s. d.  |
|-------------------------------------|-------|--------|---|-------|--------|
| Apples, English, dessert            |       |        | Greengages, $\frac{1}{2}$ -sieve        | 4 0   | to 6 0 |
| $\frac{1}{2}$ -sieve                | 6 0   | to 8 0 | Lemons, Messina, case                   | 12 0  | 20     |
| culinary, $\frac{1}{2}$ -sieve      | 3 0   | 4 0    | "    Naples                             | 25 0  | 0 0    |
| Bananas                             | 8 0   | 12 0   | Melons, each                            | 1 6   | 2 0    |
| Currants, red, $\frac{1}{2}$ -sieve | 5 0   | 6 0    | Nectarines, doz.                        | 3 0   | 12 0   |
| "    black                          | 9 0   | 10 0   | Oranges, case                           | 12 0  | 16 0   |
| Figs, green, doz.                   | 2 0   | 4 0    | Peaches, doz.                           | 3 0   | 12 0   |
| Filberts, lb.                       | 0 8   | 0 9    | Pears, Jargonelle, $\frac{1}{2}$ -sieve | 3 0   | 4 0    |
| Gooseberries, $\frac{1}{2}$ -sieve  | 4 0   | 5 0    | Pines, St. Michael's,                   |       |        |
| Grapes, Hamburgh, lb.               | 0 9   | 1 6    | each                                    | 2 6   | 5 0    |
| Muscat                              | 2 0   | 3 0    | Plums, Orleans, $\frac{1}{2}$ -sieve    | 4 0   | 5 0    |

### Average Wholesale Prices.—Vegetables.

|                         | s. d.             | s. d.  |                        | s. d. | s. d.             |
|-------------------------|-------------------|--------|------------------------|-------|-------------------|
| Artichokes, green, doz. | 2 0               | to 3 0 | Lettuce, Cabbage, doz. | 0 6   | to 0 0            |
| "    Jerusalem, sieve   | 1 6               | 0 0    | "    Cos, doz.         | 0 9   | 1 0               |
| Batavia, doz.           | 2 0               | 0 0    | Marrows, doz.          | 1 0   | 0 0               |
| Beans, French, lb.      | 0 2               | 0 0    | Mint, doz. bun.        | 4 0   | 0 0               |
| "    broad              | 3 0               | 4 0    | Mushrooms, forced, lb. | 0 8   | 0 9               |
| "    Scarlet Runners    | 4 0               | 5 0    | Mustard & Cress, pnnt. | 0 2   | 0 0               |
| Beet, red, doz.         | 0 6               | 0 0    | Parsley, doz. bnchs.   | 3 0   | 0 0               |
| Cabbages, tally         | 5 0               | 0 0    | Peas, blue, bushel     | 3 0   | 4 0               |
| Carrots, new, bun.      | 0 2               | 0 3    | Potatoes, English,     |       |                   |
| Cauliflowers, doz.      | 3 0               | 0 0    | new, cwt.              | 6 0   | 7 0               |
| Corn Salad, strike      | 1 0               | 1 3    | Radishes, doz.         | 1 0   | 0 0               |
| Cucumbers, doz.         | 2 6               | 4 0    | Spinach, bush.         | 2 0   | 3 0               |
| Endive, doz.            | 1 6               | 0 0    | Tomatoes, English, lb. | 0 4   | 0 5               |
| Herbs, bunch            | 0 2               | 0 0    | "    Jersey            | 0 3   | 0 3 $\frac{1}{2}$ |
| Horseradish, bunch      | 2 6               | 0 0    | Turnips, bnch.         | 0 2   | 0 3               |
| Leeks, bunch            | 0 1 $\frac{1}{2}$ | 0 2    |                        |       |                   |

### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                           | s. d. | s. d.   |                         | s. d. | s. d.  |
|---------------------------|-------|---------|-------------------------|-------|--------|
| Aralias, doz.             | 5 0   | to 12 0 | Fuchsias                | 4 0   | to 0 0 |
| Araucaria, doz.           | 12 0  | 30 0    | Grevilleas, 48's, doz.  | 5 0   | 0 0    |
| Aspidistra, doz.          | 18 0  | 36 0    | Hydrangea, pink         | 10 0  | 12 0   |
| Crotons, doz.             | 18 0  | 30 0    | Lycopodiums, doz.       | 3 0   | 0 0    |
| Cyperus alternifolius     |       |         | Marguerite Daisy, doz.  | 4 0   | 6 0    |
| doz.                      | 4 0   | 5 0     | Mignonette              | 6 0   | 0 0    |
| Dracæna, var., doz.       | 12 0  | 30 0    | Myrtles, doz.           | 6 0   | 9 6    |
| "    viridis, doz.        | 9 0   | 18 0    | Palms, in var., doz.    | 15 0  | 30 0   |
| Ferns, var., doz.         | 4 0   | 18 0    | "    specimens          | 21 0  | 63 0   |
| "    small, 100           | 10 0  | 16 0    | Pandanus Veitchi, 48's, |       |        |
| Ficus elastica, doz.      | 9 0   | 12 0    | doz.                    | 24 0  | 30 0   |
| Foliage plants, var, each | 1 0   | 5 0     | Shrubs, in pots         | 4 0   | 6 0    |

### Average Wholesale Prices.—Cut Flowers

|                         | s. d. | s. d.  |                            | s. d. | s. d.   |
|-------------------------|-------|--------|----------------------------|-------|---------|
| Arums, doz.             | 3 0   | to 0 0 | Lily of Valley, 12 bnchs   | 12 0  | to 18 0 |
| Asparagus, Fern, bnch.  | 1 0   | 2 0    | Maidenhair Fern, doz.      |       |         |
| Bouvardia, coloured,    |       |        | bnchs.                     | 4 0   | 5 0     |
| doz. bunches            | 6 0   | 0 0    | Marguerites, white,        |       |         |
| Carnations, 12 blooms   | 0 6   | 1 0    | doz. bnchs.                | 2 0   | 0 0     |
| Cattleyas, doz.         | 12 0  | 15 0   | "    yellow, doz. bnchs.   | 1 0   | 0 0     |
| Cornflower, doz. bun.   | 1 0   | 0 0    | Myrtle, English, per       |       |         |
| Croton foliage, bun.    | 0 9   | 1 0    | bunch                      | 0 6   | 0 0     |
| Cycas leaves, each      | 0 9   | 1 6    | Odontoglossums             | 4 0   | 0 0     |
| Cypripediums, doz.      | 2 0   | 3 0    | Orange blossom, bunch      | 2 0   | 0 0     |
| Eucharis, doz.          | 2 0   | 3 0    | Roses, Niphetos, white,    |       |         |
| Gardenias, doz.         | 2 0   | 0 0    | doz.                       | 1 0   | 1 6     |
| Geranium, scarlet, doz. |       |        | "    pink, doz.            | 2 0   | 0 0     |
| bnchs.                  | 4 0   | 0 0    | "    yellow, doz. (Perles) | 1 0   | 1 6     |
| Gladiolus, white, doz.  |       |        | "    Generals              | 0 5   | 0 6     |
| bunches                 | 3 0   | 0 0    | Smilax, bunch              | 2 6   | 0 0     |
| Gypsophila, doz. bun.   | 3 0   | 0 0    | Stephanotis, doz. pips     | 1 6   | 0 0     |
| Ivy leaves, doz. bun.   | 1 6   | 0 0    | Stock, double, white,      |       |         |
| Lilium Harrisii         | 2 0   | 3 0    | doz. bun.                  | 2 0   | 3 0     |
| lancifolium alb.        | 1 0   | 1 6    | Sweet Peas, white and      |       |         |
| "    l. rubrum          | 1 0   | 1 6    | coloured, dozen bun.       | 1 0   | 0 0     |
| "    longiflorum        | 2 0   | 3 0    | Tuberoses, dozen           | 0 3   | 0 4     |

## Trade Catalogues Received.

E. P. Dixon and Son, Yorkshire Seed Establishment, Hull.—*Bulbs.*  
 Frank Dicks and Co., 66, Deansgate, Manchester.—*Bulbs.*  
 Dobbie and Co., The Royal Seedsmen, Rothsay, Scotland.—*Autumn Catalogue.*  
 Dobbie and Masson, 22, Oak Street, Manchester.—*Bulbs.*  
 Hogg and Robertson, 22, Mary Street, Dublin.—*Bulbs.*  
 Kent and Brydon, Darlington.—*Bulbs, Fruit Trees, &c.*  
 Albert F. Upstone, 35, Church Street, Rotherham.—*Bulbs.*  
 Ant. Van Velsen and Co., Wilhelmina Park, Haarlem, Holland.—*Bulbs.*





## The Wheat Market.

The benefit to the farmer from the recent rise in Wheat is likely to be shortlived, for reports from Continental countries show that during the next twelve months they will be nearly, if not quite, self-supporting, and the United Kingdom being the only available market for the surplus from America and Australia, there is little prospect of present prices being supported. It is not at all unlikely that we shall have Wheat at 25s. here as soon as harvest is over, and it will be interesting to see how far the millers and bakers may succeed in keeping up the price of the loaf. This has been kept up well after being artificially raised at the introduction of the registration duty, and we may be allowed to hope that the consumer may get his own back when the rebound comes. Agriculture is in pressing need of all the money the consumer can afford to pay, but too much toll is exacted by those who do the transfer.

Of the countries of Europe, Italy and Spain are the only two with comparatively poor crops of Wheat. The fine crops of the Continent, unlike our own, are in many cases already harvested, so there is little chance of much demand from these, except at very low prices. England will therefore once more become the dumping ground for the world, and farmers will act wisely in threshing and realising their Wheat at the earliest opportunity. Prices are sure to fall, but there is one consolation to the British farmer: "the foreigner will have to pay 13½d. per quarter for the privilege of competing with him."

That harvest will be much later than has been generally expected is now certain. Agricultural reports were published as late as August 11 forecasting a commencement as early as the 20th or 25th in certain districts, where we can guarantee there will be no reaping before September 4 at the earliest. That this may help to steady prices during the next month is probable, but it will afterwards tend to concentrate autumn thrashings into a small space of time, and intensify the inevitable glut. It may appear wearisome reiteration, but the fact that the earliest thrasher always meets with the best market is especially worth repeating this year.

## Potato Disease and the Crop.

There are dire rumours abroad as to the condition of the Potato crop, and if we had not grown accustomed to the annual cry of "wolf" so persistently raised by growers we might have been seriously alarmed for the safety of the national supply. The sight of the strawsoniser working in mid-August amongst a very fine looking crop shows that there is alarm in the mind of at least one farmer. An examination of the haulm revealed no signs of disease, and though the farmers' practice to prevent in order to save curing may be sound financially, we fancy that there is a good deal more fright than injury. There has been much difference of opinion amongst this man's neighbours as to whether the sprayer had been used to prevent disease or to knock down the haulm, and so let light and air act on the soil. The appearance of the crop immediately after the operation was somewhat appalling, but now, a week later, there is no sign of damage, and, on the contrary, both leaf and stem look as healthy as possible. A portion of the field is left unsprayed, and we shall watch with great interest for any difference that may develop.

We have so far seen no sign of the ordinary Potato disease, but have had our attention drawn to dying or dead patches in certain fields, and in others to the numerous backward and feebly looking roots which are evenly distributed throughout the crop. The patches we should attribute to wireworm, which is generally very local in its attacks. The haulm is in many cases almost detached from the root, and it shrivels up and dies away. At these roots there may be one fair-sized tuber and the rest small rubbish. The weak growth and delicate appearance of many individual roots spread throughout a crop is probably due to one of two causes, both affecting the seed before planting; firstly immature ripening, secondly a severe chill in the storage pit.

There was certainly frost severe enough last spring to injure, or, rather, weaken, tubers which were afterwards used for seed; but last year's crop was so full of second growth which had not properly matured at lifting time, and was quite unfit for seed purposes, that we think herein lies the solution of the problem. When all the tubers of a certain size are retained for seed, without any regard for their ripeness, a very large proportion of them may be quite unfit for the purpose, and we are certain this was so in many instances last spring.

We do not suggest for a moment that there is no disease prevalent anywhere, for the weather just now is most favourable for its spread; but we wish to point out that failures from poor seed or grubs may have but a very small influence for evil on the general crop, and one almost immaterial when compared to the terrible ravages of fungoid diseases. Ill news spreads as rapidly as Potato disease, and we fancy that the dire reports now in circulation have made much greater progress than the attacks they announce. If there is real disease there will soon be ample evidence of it. A bad attack has never been isolated yet.

The new kinds are all looking satisfactory as regards outside appearance. Empress Queen and Royal Kidney are reported to promise well at the root, but Charles Fidler, though a heavy crop, perhaps the heaviest, shows signs of coarseness already. Up to Dates from newly imported seed (Scotch) will hold their own well, we think. They held the markets so well last season that there must be a great demand for them as soon as they are ripe.

## Work on the Home Farm.

The long delay in the ripening of the corn is becoming more and more inconvenient to the methodical farmer. A succession of fairly rapid August harvests has made it difficult for him to accommodate himself to a September one. The efforts will now be chiefly directed towards clearing off every possible arrear of work, not only leaving nothing over until autumn, but doing a few things which are usually not done until then.

We are busy manuring land which will be ploughed for Potatoes in November. There would be no time to manure them after harvest. They are now stocked with breeding ewes, and will be, for it would be unwise to put lambs on them after the manuring.

The coals have been led here, but a farmer's waggon laden with black diamonds is no uncommon sight on the roads. Coals have kept their price well. We are still 2s. higher than before the war, and yet trade is supposed to be very bad. Another good reason for farmers to combine.

There has been plenty of hedge trimming to occupy the skilled hands. It is work which may be very suitably done now. The hedges have got their full growth, and look more ragged than usual after such a growing season. If we get all the low hedges neatly trimmed now we shall be able to present a good appearance when the shooting parties assemble after the stubbles are cleared. We fear partridges have suffered from the cold season, and sport will not be so good as usual. There are many barren birds about.

A practical farmer in the next parish declares that he will mow all his grain with the scythe if he can get the men to do it. This endorses our views, which were expressed last week. Binders may be used of sheer necessity, but may prove very costly unless we are to have a September summer.

Lambs are still doing well, and there is a plethora of keeping, but stock markets are full, and sheep lower in price, 4s. per head the butchers say. Farmers must have money for current expenses, so they are selling sheep which they will have to repurchase later on. We see by the papers that a Lincolnshire farmer has lost fifty sheep after twice dipping at a short interval. The nature of the dip is not stated. Can there have been mercury in it?

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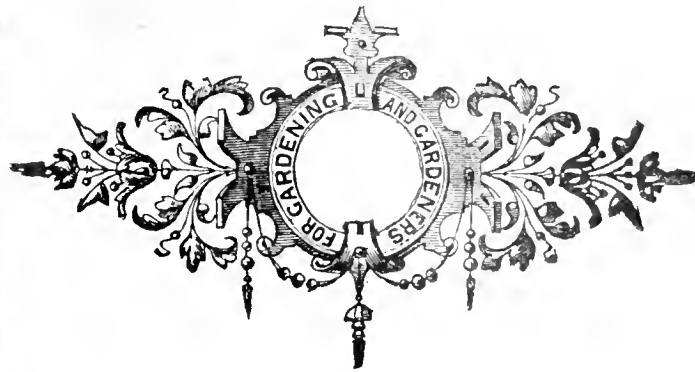
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## Journal of Horticulture.

THURSDAY, SEPTEMBER 4, 1902.

### Rural Pursuits.

**A**ND the Lord God planted a garden eastward in Eden, and there He put the man whom He had formed. The above passage from Holy Writ carries our minds backward for almost 6000 years to the first record of a garden—a garden in which the inmates had no need to toil in order to reap an abundant harvest. Then came the Fall; and henceforth it was decreed that "thorns and thistles should spring up," and that man should "eat bread by the sweat of his brow." In those far-away days, which may be termed the "babyhood" of the earth, rural pursuits formed for a time the only occupation of the sons of men; and it would be difficult to conceive more congenial employment when individual wants were few, and competition scarcely in existence.

After a time cities sprang up, and division of labour must to some extent have been practised; and from that time till now there seems to have been a gradually increasing tendency for the population to build and live in towns, rather than to distribute themselves more evenly over the surface of the earth. Science and art, as applied to manufactures, claimed more and more attention as time passed on, until at length, among highly civilised communities, the ancient arts of gardening and farming, if not neglected entirely, seem to have progressed much more slowly than occupations of infinitely more recent origin. That there is room for vast improvements in our methods of conducting many rural pursuits cannot, I think, be denied; and now that the "emptiness" of city life seems to become so apparent to town dwellers in the second and third generation, "the awakening," which has already begun, may become so strong a

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force as to break down all barriers which for a time prevent the needed reform.

#### The Awakening.

At the present this fact stands out clearly, viz., that with all the excitement begotten of the race for wealth, city life has a great void, for it does not satisfy the gardening instinct implanted to some extent in every human breast. That this instinct exists is clearly shown on all sides, and under most adverse conditions. Sometimes in the slums of a great city it takes the form of growing a few p'ants on the window-sill or roof of a house; at others by the keen delight taken in the parks and open spaces attached to so many large towns, and although the latter attempt to bring the country into the towns is deserving of all praise, yet it only partially satisfies the craving for country life, and leads millions to yearn for the health-giving power of an outdoor life.

In the past our rulers have neglected to give due encouragement or support to those engaged in rural pursuits; but the need has at last become so apparent that it cannot longer go unheeded. Those engaged in rural pursuits lead the most natural—I might almost say the *only* natural life—and unless there is a constant exchange of population between country and town, town and country, the stamina of the nation becomes undermined, and the decay of the race assured. Under existing conditions, thickly populated country districts are urgently needed from which to draw supplies of vigorous manhood to replace the weaklings of the great towns; and the latter, if suitable employment could be found for them, would have a quickening influence on village life, and their descendants perhaps show alertness as well as increased vitality. The Garden City movement, if it can be brought into anything like general use by large employers of labour, must also prove a wonderful power for good on both the physical health and moral condition of the workers, for though the days may be spent in the factory, the healthy condition of home life, and the evening hours spent in the gardens, will be a vast improvement upon the conditions which prevail generally to-day.

The awakening! How has it been brought about? It has been dawning upon the nation for a long time, but the climax was reached through the perils of war, when the stamina and hardness of country and colonial troops proved the great tower of strength in the time of need, and when mere book-learning and theoretical knowledge and tacticity were of little avail against a foe trained by daily observation to be full of ready resource. The recent movement in connection with the teaching of Nature Study is evidently a step in the right direction, because its fundamental principle is that it fosters in the young a keen spirit of observation; step by step they are led on to see cause and effect from actual work and experiment. This must be infinitely better than cramming the young brain with theories or facts supposed to have been proved by others, and by interesting the young in the real living things of Nature a far greater keenness must be engendered in country pursuits than can be imparted by the reading of books alone. To my mind, however, something more is needed in the later stages of instruction, viz., a greater amount of real practical work, in which not only knowledge but *dexterity* is fully put to the test.

In regard to horticultural pursuits, it is not the amount of knowledge which any individual possesses which regulates that individual's usefulness or probable success, but the way in which the knowledge gained will be turned to the best account, and it is undoubtedly true that the man brimming over with knowledge often accomplishes practically nothing compared with the results achieved by the active individual, who runs what he *does* know for all it is worth. We want a few men brimming over with knowledge, but we want hosts of active workers who will achieve much by strenuous endeavour.

I maintain that a strong feature in the training of gardeners in the past has been the encouragement given to close observation and the practice of judging the rising young hand by the results accomplished rather than by knowledge which was comparatively barren of results. This explains why the best private gardens in the country have in the past been the best training schools for real gardeners, and although modern institutions offer some advantages, a long

course in a good private garden is yet necessary to the making of the highest type of gardener. Rural pursuits have undoubtedly started on the upward plane, and when greater facilities are given for acquiring land, the wasted soil of Britain will again yield bountiful crops, and the grinding life which tens of thousands lead to-day be brought into greater harmony with the ideals which prevailed in that garden "eastward in Eden."—H. D.

### Mutations of Seasons.

The untoward nature of the weather this season, particularly in the northern part of the British Isles, may well occasion the resuscitation of the not uninteresting question, the deterioration of the climate of our island. From time to time the subject has aroused the attention of horticulturists, and though perhaps much light has not been shed upon it, yet much useful information is evolved in the inquiry. To many of your readers the research of the late worthy Curator of Edinburgh Botanic Gardens, Mr. MacNab, will still be fresh in their memories. There is reason to think that the subject would occupy the attention of man at a very early stage of his life history. Many things lead up to such a supposition.

One very pertinent fact is the outstanding characteristic attaching to the human mind with respect to the comparative values it assigns to the present and the past. It may well be said in this connection that we live in the past and only breathe in the present. At all events, few are unaware of the fact that the "good old days" are considered to have been always superior to the present, or the period succeeding them, and, what is still stranger, we somehow fall into the mistake of also assenting. It is needless to expatiate on this interesting quality of the mind, for all know "distance lends enchantment to the view." There is no doubt whatever, however beautifully it pictures the blue mountain peaks of the past, that as far as climatology is concerned, the memory is untrustworthy. From what we personally know of the past history of our planet, though there have been interruptions, we see nothing but that which has the impress of the stamp of progress upwards and onwards. And we have no doubt that instead of a gradual deterioration of climate a gradual amelioration is taking place since at least the period when man made his appearance on the earth.

A Celtic saying exists whose origin probably rests in the mists of antiquity, which predicts annihilation to the greater half of the British Isles by incessant rain. Though we place but little faith in traditionary lore, yet in this we cannot avoid thinking that the fact which gave birth to the expression is very significant as denoting then much worse conditions than now exist. Without traversing beyond the Seventeenth Century ample is there recorded to show that nothing approaching the serious nature of the weather conditions the whole century, more or less, contained has been since experienced. Perhaps the climax of this peculiarly unfortunate century was reached in the period elapsing between 1694 and 1701. For seven years, in Scotland at least, matters were so very serious that the earth absolutely refused to mature food for man or beast. Nothing but blank dismay met the hopes of the disconsolate people year after year, while famine and pestilence were the presiding monarchs of the land.

Again, in the fifties, a not less phenomenal state of matters held sway, and although it did not contribute so fatally to dearth and pestilence, yet it was serious enough to interfere with the order and regulation of food supplies. One year was a year of plenty, in some instances second crops of certain vegetables being exposed for sale in Edinburgh well into the months of winter. Such was the abnormal length of the summer that fruit trees blossomed a second time. Then the following year was, as would be expected, one full of disappointments. This was, however, one of those interruptions which we find everywhere in Nature, evidently a necessity in the grand scheme of progress, and though we poor mortals cannot assign a cause for them, we can easily see that she is relieved after her travail and smiles upon us with a still more benign countenance than before.—D. C.

**Dendrobium × Leechianum.**

A distinct and very beautiful hybrid from the same parents as *D. × Ainsworthii*, namely, *nobile* and *aureum*, and is generally considered a better grower than *Ainsworthii*. In a short time healthy little bits make fine plants if well treated. They are best raised from flowering stems, and if these are taken off directly the blossoms are past and laid in pans of moss, they will be nice stock, ready for potting separately by the end of the season. The flowers of a good form of *Leechianum* (see illustration) are 4 in across, the sepals white, tipped with purple, and feathered; a crimson blotch appearing on the lip. Messrs. Veitch and Low and Co. possess this hybrid.

**The Week's Cultural Notes.**

Bright days and cold nights are what may be expected during September, and a watch must be kept on the temperatures. The plants are growing very freely now, and a check in any department owing to a low night temperature must be avoided. When the fires have been discontinued during the summer months they must be again lit up, taking the opportunity first of thoroughly cleaning the firebars, flues, and every part of the apparatus, attending to any leaks that may be in the pipes, and putting everything in order for the winter. This will ensure a satisfactory working when most needed.

It is unsafe to leave tender plants out of doors without the protection of a frame after this, and if any such as *Dendrobium*, Mexican *Laelias* and others are still in the open the precaution of covering with mats nightly must be taken at least by the middle of the month, as frosts are by then to be expected. If these plants, and *Thunias*, *Bletias*, and others can have the convenience of a sunny and fairly dry greenhouse or vinery now, they are safer here than anywhere. The *Thunias* will by now have lost most of their roots and leaves, but if any activity is shown a little water must still be given or the stem will be weakened for next season.

Not many growers are really successful with *Disa grandiflora*, but the hybrid between it and *D. racemosa*, viz., *D. Veitchii*, is more amenable to culture. Just now the flowering stems are dying off, and a frequent mistake is made by drying them at the roots. Less water is needed, of course, than when the growth was in full swing, but *Disa Veitchii* should never be really dry. In a few weeks time new growths of many of the *Disas* will show, and this is the best time to give fresh compost. Good peat and moss with a little loam and finely broken crocks will grow them well, and a cool airy house or frame is best for them.

Deciduous *Calanthes* are taking full supplies of water now, and require abundant room, so that both foliage and pseudo-bulb have room to develop properly. As soon as the latter have attained to their full size, it will be found necessary to slightly diminish the water supply, and as the foliage turns colour, preparatory to falling, a still further reduction must be made. I have always found that the colours of the blossoms are improved by withholding the water from the time the colour shows. The roots by this time have lost most of their power, and no good can accrue from pouring water on the compost.—H. R. R.

**The Homes of Orchids.**

"One feature of tropical vegetation which differs greatly from that of temperate climes," says Mr. L. Castle in his interesting little book on Orchids, "is the large numbers of species found in a comparatively small area. In Europe, for example, we have large forests of one or two species of trees, and thousands of acres of open moorland similarly clothed with a few species of dwarf plants, like the common Ling; but in the tropics every few square yards is a small botanic garden. This is shown by the fact that a dozen different species of Orchids have been found growing upon one tree, and it is estimated that over 300 species have been introduced from Java alone. In the dry season, from April till October, the average temperature is about 86deg, while in the wet season, from November till March, it ranges from 83deg to 90deg. Upon the Indian continent, in Burmah, and contiguous countries, where Orchids are also found in considerable numbers, the seasons are similar, namely, in wet and dry periods, the former the season of growth, and the latter that of rest; but the further inland the situation, the greater are the extremes of temperatures, and in some places the rainfall is excessive, amounting to hundreds of inches a year."

**Rambles in Switzerland.**

(Continued from page 200.)

Now for a few words on the vegetable products of the Swiss valleys, and first of these must be the fruit trees, for no object strikes a stranger more forcibly than the continuous orchards and vineyards which line both sides of all the roads in all these valleys.

The vineyards almost exclusively are confined to the mountain sides, where they blend with the valleys, and they do not, by their produce, deserve much further notice. With scarcely an exception, the wines manufactured from their Grapes are thin and acid, and not one is equal to good cider. The only exception was that to which was applied the not-over-refined name of *Liebfraumilch*—"Pretty Maid's Milk." I was laughingly told that we English expect every country like our own to have districts noted for something pleasant to the palate, such as our Yorkshire hams, Norfolk dumplings, and Cheshire cheeses, and to celebrate anniversaries by special eatables, as plum puddings at Christmas, buns on Good Friday, and pancakes on Shrove Tuesday. But I had an avalanche of instances to retort upon my assailant, for every Swiss town has some gourmandic speciality. Bale,

**Dendrobium × Leechianum.**

the first town within the Cantons, has its *leckerli*, a thick kind of parliament—I mean a cake, not an assembly of presumed wise men; and in every town I passed through there was some notable eatable, until I escaped through the last municipality, Geneva, without being made dyspeptic by its gingerbread.

The Pear trees are next predominant in numbers, for their fruit, as I have already mentioned, is cut into halves, dried, and consumed largely in winter. It was too early in the summer for me to ascertain the chief varieties cultivated, but ripe Little Muscats were then (the first half of July) plentiful in the markets. The Cherries—*Bigarraus*, *Black Hearts*, and a red Flemish, were also very abundant, selling retail at the rate of 2½lb for 4d. Walnut trees are numerous everywhere, but Apple trees are scant, and Plum trees still more rare. Bilberries and Alpine Strawberries were plentiful in the markets, and by the roadsides where shaded by trees. Of kitchen vegetables there were abundance of all kinds common in our markets, and the only peculiarity I noticed was that more white Carrots were offered for sale than those that are red-rooted.

Of ornamental trees, the prevalence of the *Catalpa* is remarkable, and especially for the freedom of its blooming.



*Tilia microphylla* is also quite as much cultivated as is the common Lime, or Linden tree, with us. Its foliage is not so bold as that of the latter, but its flowers are far more abundant, open earlier, and are more fragrant.

Of the wild flowers I can say but little, for I had to pass rapidly through the districts where the Alpine Flora is richest. Two plants, however, must attract even the notice of eyes looking from the windows of a railway carriage—the red-berried Elder (*Sambucus racemosa*), and the yellow Fox-glove (*Digitalis lutea*). Why are they not more cultivated in England? They are very ornamental. Then the Campanulas are strikingly numerous. There are thirteen species in the vicinity of Lucerne, ranging from the *C. pusilla*, barely an inch high, to the *C. pyramidalis*, which is 4ft. All I saw impressed me with the opinion that they were deeper in colour and larger in flower than the same species which I had seen in other European countries.

The Alpine Forget-me-not, only found in this country on the summits of the Breadalbane mountains, cheered me with its bright blue eyes everywhere; while the 'Alpine Lady's Mantle' spread its grey satiny leaves, along with the Arctic Willow, the favourite food of the chamois, over the stony knolls, as if in pity for their nakedness. I found a few specimens of the beautiful lilac *Soldanella alpina*, and also several tufts of the glacier *Ranunculus*, on a kind of morain at the foot of a hardened snow-wreath. The *Ranunculus* was higher up, and grew on the loose debris, without a particle of verdure around it. It seemed like the last effort of expiring nature to fringe the limit of eternal snow with life.

On this hill (Mont Chenaletta), composed of very friable schistose rock, I gathered a considerable number of very interesting plants peculiar to the Alps. The *Arnica montana* displayed its large yellow composite flowers in the shady recesses of the rocks; and, as if to illustrate the proverb that the antidote is ever beside the evil, I found its juicy stems very serviceable in healing a bruise on the leg which I got from a falling stone when gathering specimens. Another composite plant, the *Chrysanthemum alpinum*, whitened in thousands the slopes of debris. It has been observed, with *Phyteuma pauciflora*, beside the Lys glacier on Monte Rosa, at 11,352ft. Nothing could exceed the beauty and luxuriance of the patches of *Linaria alpina*, covered with a profusion of orange and purple labiate blossoms, which spread everywhere over the loose soil. No less striking were the sheets of Forget-me-not-like flowers, blue as the sky itself, produced by the *Eritrichium nanum*, growing in the moist sunny fissures. At the base of the hill on the Italian side, where there was a slight tinge of grassy verdure, the yellow Star of Bethlehem (*Ornithogalum fistulosum*) and the *Nigritella angustifolia* struggled into existence. The former rises an inch or two above the soil, and produces two or three brilliantly yellow flowers on each stem; while the compact showy heads of deep blackish crimson flowers of the latter, springing from very short and very narrow leaves, diffuse a fine vanilla-like fragrance. At lower elevations they grow in great profusion, and form the finest ornaments of the Alpine pastures.

Among the Saxifrages which I observed growing more or less plentifully were the *S. androsacea* (of which I could get no specimen perfect, for the marmot is so fond of it that it nibbles its stems, leaves, and flowers all round), the *S. bryoides*, *Aizoon*, *biflora*, *cæsia*, and *muscoïdes*. A short distance below the summit there were several large snow-wreaths. Their perpetual drip nourished a glowing little colony of the unrivalled *Gentiana bavarica*, and the compact sheets of the *Androsace glacialis*, sprinkled over with bright pink solitary flowers. In one place there was a curious natural conservatory. The under surface of the snow having been melted by the warmth of the soil—which in Alpine regions is always markedly higher than that of the air—was not in contact with it. A snowy vault was thus formed, glazed on the top with thin plates of transparent ice; and here grew a most lovely cushion of the *Aretia helvetica*, covered with hundreds of its delicate rosy flowers, like a miniature *Hydrangea* blossom. The dark colour of the soil favoured the absorption of heat; and, prisoned in its crystal cave, this little fairy grew and blossomed securely from the very heart of winter, the unfavourable circumstances around all seeming so many ministers of good, increasing its strength and enhancing its loveliness.—W. J.

(To be concluded.)

## South African Market Gardening.

The market gardener is to a considerable extent a yet unknown quantity in South Africa. In the Transvaal this is especially the case. There has always been a good market for all kinds of garden produce in Johannesburg, but the demand has invariably been greater than the supply. The same remark applies to most of the towns and villages in South Africa, with the exception of Cape Town, and here vegetables such as Cabbages, Peas, Beans, and Tomatoes can be obtained at reasonable prices. In Natal the "market gardens" are almost entirely in the hands of the coolies. These people were originally brought over from India under indentures to work on the railways for a certain number of years.

After their period of service expired they took up plots on the land between Durban and Pietermaritzburg. They have turned their attention principally to fruit and keep the market well supplied with Bananas and Pine Apples, which can generally be bought at the rate of 2s. per 100 for the former, and six for a shilling of the latter. They are not market gardeners in reality, though they are called so. Chinamen are popularly supposed to be excellent market gardeners, at least this is the opinion held in Australia and the Pacific coast. Some of these people have at times settled down in the Colonies and started gardens, but Europeans in Africa will have no dealings with them, and they have had to turn their attention to trading with the natives.

The Boers, as a rule, live on Pumpkins. This is their one vegetable food. Pumpkins are no trouble to grow, they are also no trouble to prepare for the table, and it is hard to enter a Boer homestead at the dinner hour without finding this vegetable on the table. Pumpkin is very well in its way, but Englishmen soon tire of it and look for others, which as a rule they cannot get. On the mines along the Witwatersrand reef the great difficulty the men had to contend with was the absence of all green food. Many of these mines employed as many as five or six hundred Europeans, and it is not going beyond the mark to say that the white men on the reef would have disposed of enough garden produce to have kept dozens of gardeners busy, but no attempt was ever made to supply them. The writer lived on one occasion for about a year on a mine situate about ten miles from Johannesburg, and during that period the only vegetable he partook of, leaving the inevitable Pumpkin on one side, were of the potted variety.

After the present difficulties are satisfactorily settled, there will be great openings for qualified market gardeners in Africa. The climate is all that could be desired. Labour is cheap, natives can be engaged to work for 15s. a month, and their food; the latter consisting of maize with an occasional supply of meat, costs very little. With a growing population, ever increasing markets will be opened up in all the large towns and villages of the colonies and the Transvaal. A few years ago an expert travelled through the country districts of the Cape and Natal giving lectures on dairy farming. This gentleman was despatched on this errand by the Government, and the farmers came in in numbers to listen to him and to ask his advice, since which a great improvement in the supply of dairy produce has been noticeable. The market gardener, however, has been altogether neglected.—D. G. R.

[It is certain the opinion expressed above will be justified by the development of a market gardening industry in the neighbourhood intervening between Johannesburg and Pretoria, which lie some fifty miles apart. There the marvels witnessed at Melbourne and San Francisco during the second decade of their existence—1860-1870—are sure of being reproduced, so that ten years hence a population of some two hundred thousand or more will be crying for fresh vegetable food during the summer months. The demand for Peas, Cauliflowers, Cabbages, Tomatoes, Melons, Potatoes and Brussels Sprouts will be enormous. But intending emigrants should recollect that, compared with England, it is an arid land, and the soil can only be kept moist and friable during the winter and spring months by continual watering or even irrigation, if good results in market garden produce are to be obtained. Then with the summer come swamping thunderstorms and often astounding hailstorms, which destroy unprotected vegetables and fruits.]

Hence the newcomer must have a little capital if he wishes to secure the first fruits of the new condition of things. So wonderful, however, are the productive properties of the soil when plentifully irrigated, that a skilful cultivator will rapidly reap the reward of his labours in the matter of produce, while for the first half a dozen years prices will undoubtedly rule high. It may be said that in mining communities market gardening is the one industry which is not overdone. Moreover, the Rand is not in the nature of a precarious alluvial mining camp, but a centre of solid wealth, which will attract the class of luxurious persons who consume fresh food in large quantities. Pastoral farmers like the Boers and isolated miners gradually learn to dispense with fresh butter, cream, milk, and vegetables. In countries such as

Australia and South Africa there is no verdant landscape or dairy farming scenery, and "a farm" is the last place at which to procure the aforesaid necessities of European life. These things are only developed within easy distance of the most populous districts—one of which the Rand is certain to become.]

## An Evening with the Microscope.\*

(Concluded from page 203.)

The most interesting members of the class Arachnidae, and well-known to all of us, are the common red spider which infests our plants, and also the cheese mite, both of which, when viewed under the microscope, have the appearance of great beetles marching about. As regards the parasites of birds, animals and human beings, it is a most remarkable fact that those of nearly every genera differ in size, although they are practically the same in formation. For instance there are the large and small fleas; the large and small lice, &c. Let us take the acari of the linnet, humming bird, swallow, starling, ferret, goose or hare; the parasite of the rat, red deer, hornbill, horse, pig; the flea of the cat, dog, pig, fowl, human being, all much resemble each other in their respective genera, and existing as males and females. As regards the parasites of human beings, probably the most common and the least known is the *Demodex folliculorum* that infests the follicles of the skin, more particularly the nose, and few people are without them. You have seen dark and mattery spots on the nose, and people squeeze them up with their fingers and out comes a little matter which contains the *demodex*, a very minute insect, but under high powers of the microscope it has the appearance of a long very thin kidney potato, or very thick worm, with four legs on each side of the upper portion of the body. It is figured in Messrs. Beck's book on the Microscope, magnified 900 linear, also in the Micrographic Dictionary, and we are told by a highly experienced man that one of the varieties of mange in dogs is caused by the *Demodex folliculorum*, and that no permanent cure is known, while the parasite that causes mange in the horse is of a totally different character, and very much resembles the cheese mite.



*Waldsteinia trifolia.* (See page 218.)

One of the most dreaded parasites to cattle is the gad-fly (*Tabanus*). They deposit their eggs by means of their ovipositors, under the skin of animals, where they remain to hatch out, and are for some time very troublesome. Animals so infested are easily detected by swollen humps, generally on their backs and sides. The eggs, larvæ, and portions of this insect are very interesting microscopic subjects.

Hydra or fresh water polypes are also most interesting microscopic subjects. They are to fresh water insects what the octopus and *Physalia pelagica*, or Portuguese man-of-war, is to living beings in the sea. They are of most remarkable construction, and common in almost every pond of fresh water. There are four or five British species. When contracted they appear like balls of jelly, about six-tenths of an inch in diameter, and are found adhering to sticks that may be in the water, stones, leaf stems, &c.; in fact, they attach themselves to any substance by means of their tails. They have a body, a number of tentacles or feelers, a mouth, but no eyes. They throw out their feelers or tentacles into the water, and the moment a water mite, insect, or worm touches them, they are instantly seized, drawn up into the stomach, and all nutriment sucked out of them. The victim is then disgorged, and if there is any portion left that the stomach could not hold, the remainder is treated in the same way.

Doubtless our best authority on this subject was the late Henry Baker, Esq., F.R.S., who made long experiments with them, and published the results in book form in 1743, being a series of letters of his experience to Martin Foulkes, Esq., then President of the Royal Society. There are many illustrations of them in his work, some showing the captured worm. Again, in Quekett's Lectures, and in Mantell's "Invisible World," published in 1850, there is a coloured illustration showing the worm captured, and also in the stomach of the animal. As regards the numerous water fleas and fresh water mites, these are remarkably interesting when viewed alive in water in the zoophyte trough.

Spicules of sponges and gorgonias, sections of the spines of *Echinus* (Sea-urchin), *spatangus* (Heart-urchin or Sea-bun), *holothuria* (sea cucumber), *ophiocoma rosula* (British star fish), young oysters, foraminifera and *Polycistma* are all remarkably beautiful subjects for the microscope.

Micro-photographs also claim a share of attention, whether they are copies of Scripture extracts, pictures, or views of various parts of the country. For instance, just picture to yourself Sir Walter Scott's monument in Edinburgh, or the Pagoda and fountain at Alton Towers being mounted on slides, the subjects themselves not being larger than the head of a pin, and quite indiscernible to the naked eye.

Of minerals I have a good collection, and it would puzzle me to say which are the most beautiful and interesting—those mounted as opaque objects, or those for transparent and polarised light. As regards polarised light there are a great many subjects mounted for this purpose—animal, vegetable, mineral, chemical, and crystals. Probably none are more beautiful than a section of the horn of a rhinoceros, the tendon of an ostrich, crystals of sulphate of copper and magnesia, or crystallised salicine; but there are abundance of them equally beautiful.

As regards anatomy (human and animal), pathology, histology, morbid and other diseases, I have a collection of over 1,000 slides on these subjects, and 6,000 slides in all, I think sufficient has now been said, although, if time would allow, some of these are most beautiful and full of interest. As in all other branches of study, it is very necessary to have some good books on the subject to refer to. I have found the following very useful from which to gather information which I possess, viz.:—

Lindley's School Botany  
Lindley's Vegetable Kingdom  
The Treasury of Botany, 2 vols., by  
Lindley and Moore  
Withering's British Plants, condensed  
by Macgillivray  
Hooker's British Flora  
The Microscope, by Lardner  
The Achromatic Microscope, by Beck  
Microscopic Science, 2 vols., by Cole  
The Microscope, by Dr. Carpenter  
The Microscope, by Dr. Carpenter,  
edited by Dallinger, last edition  
Microscopic Anatomy of the Human  
Body, 2 vols., by Hassell  
The Invisible World, by Mantell  
Micrographic Dictionary, by Griffith  
and Henfrey  
Outlines of Practical History, by Stir-  
ling  
Elements of Histology, by Klein  
History of Polypes, by Baker  
Textbook of the Microscope, by Griffith

Spectrum Analysis, by Roscoe  
Spectrum Analysis, by Schellens  
British Zoophytes or Corallines, by  
Landsborough  
Manual of Zoology, by Nicholson  
Infusoria (Diatomaceæ and Desmi-  
daceæ), by Pritchard  
Microscopic Fungus (Rust, Insect,  
Mildew, and Mould), by Cooke  
The Insect World, by Fignier  
A Naturalist's Voyage Round the  
World, by Charles Darwin  
British Sea-Anemones and Corals, by  
Gosse  
The Annual of Microscopy  
Quekett's Lectures  
Manual of Injurious Insects, by  
Ormerod  
Cassell's Natural History, 6 vols.  
Voyage of the Challenger, by Sir  
Wyville Thomson, 2 vols.  
&c., &c.

\* Paper read by Mr. J. Ollerhead at a meeting of the Wimbledon and District Gardeners' Mutual Improvement Society, February 17th, 1902, the subject being again brought forward on March 17th, after a discussion on Roses in pots.





#### **Maranta insignis.**

This is a very distinct and striking Maranta introduced from Brazil. It has long, semi-erect, lanceolate leaves of a light green colour, darkly shaded on the margins, and ornamented on the central portion with very dark green oval blotches, arranged alternately, a small round blotch being oppositely placed on each side of the midrib. The under sides of the leaves are of a bright maroon red colour. Messrs. Wm. Bull and Sons, of the Establishment for New and Rare Plants, 536, King's Road, Chelsea, London, S.W., exhibited a specimen of this Maranta before the Royal Horticultural Society's Floral Committee, on July 22, when they received an Award of Merit. (See illustration.)

#### **Sternbergia lutea.**

Included amongst the most beautiful of flowering bulbous plants is *Sternbergia lutea*, the Yellow Star Flower, or Winter Daffodil. The yellow perianth, or flower tube, is from 1½ in to 2½ in long, and funnel shaped. The flowers shoot up from the dark green linear foliage, and give a handsome effect. It is a popular and beautiful flower. For pot culture, or for sandy loams in sheltered borders out of doors, it is to be recommended. Mr. Robinson says: "One source of failure with *Sternbergias* and other bulbs is moving them at the wrong time, or before growth has fully developed. What they want is thorough ripening in summer and a slight protection during the winter." The bulbs of *S. lutea* must be large before they will flower freely, and imported bulbs are generally small, and will take a year or two to attain flowering size.

#### **Application of the Word Bergamot.**

A useful lesson is afforded (says "Meehans' Monthly") by the Bergamot as to the employment of common names. Botanists complain of the trouble they have to identify plants under these names, yet take little pains to ascertain priority, but adopt whatever the fancy of the moment may suggest. Thus Dr. Gray, in his "Synoptical Flora," employs the name "Horse Mint" for the whole genus, while but one species, *Monarda punctata*, is so designated by common people. Britton and Brown, in the "Illustrated Flora," class most of them as "Bergamot," which is really the most generally accepted of by the people, yet excluding *Monarda didyma*, which of all in gardens is known as the Bergamot plant. However, the term Bergamot is applied in some form or another to most of the species, though, as in the one now illustrated, the peculiar scent implied by the name is confined to but a few. Bergamot, in pharmacy, is obtained from the rind of a species of the Lemon family, and is known as the oil of Bergamot. This odour is especially characteristic of *Monarda didyma*.

#### **Japanese Irises.**

Every year sees the demand increase for Japanese Irises, as they have so many valuable qualities. They do not interfere with the possessing of other sorts, as they flower in July, after other kinds have done blooming. While single clumps are lovely, it is only when seen in great masses that one realises their availability for the producing of grand effects. Put together a hundred of them, or half this number, let the group be all one colour or a combination of colours, and for a spectacle of grandeur I do not know of any other flower that could produce it. There are early and late sorts, tall and medium growers, so that by attention to these points a year in advance, a superb, symmetrical bed could be formed. Still another thing in their favour is their water-loving habits. Many a low, moist piece of ground, in which hardly another plant will grow, would be found an ideal place for this species. In this respect it is in accord with our wild species, *Iris versicolor*, which is always looked for in such wet situations. Those wishing to propagate these Irises can do so at this time to advantage. Split them apart, reset them firmly, reducing the foliage a little, and by autumn each will be a nice clump. Other Irises can be treated in a similar way, but unless in damp ground they do not "take hold" as quickly as the others do.

#### **Waldsteinia trifolia.**

A pretty yellow flowered little hardy plant, with leaves not unlike those of a Geum, the flowers being carried, and of the form and size of those shown in the illustration on another page. We have not found any difficulty in its culture, it thriving in any ordinary garden soil on dry banks, or in the rock garden.

#### **Conference Pear.**

This most useful variety was named in commemoration of the National Pear Conference of 1885, and has gradually won a way for itself, till to-day it is probably grown in every collection. Messrs. Rivers and Son were the raisers of it. As a show Pear it has great merits, being elegant in form, and in colour a dark green, the skin being dotted with russet. The flesh is melting, juicy, and rich, yellow in tint, the fruits being in use from November 1 to third week. The raisers' description is as follows: "Fruit large, pyriform; skin dark green and russet; flesh salmon coloured, melting, juicy, and rich. Tree robust and hardy. Very prolific, a good garden and orchard fruit, and a valuable market sort. November 1 to third week. F. C."

#### **Blood-leaved Weeping Beech.**

The European Beech, *Fagus sylvatica*, has given us many nice varieties. Besides many green-leaved forms other than the cut-leaved and the Fern-leaved, there are the green-leaved weeping, the blood-leaved, and, later, the blood-leaved weeping, the one to which these notes are principally intended to refer. This subject has been before the public for some time, yet but very few collections have it. It is a beautiful tree, in my opinion (says Mr. Meehan). The appearance of its drooping branches please, drooping gracefully, which cannot be said of all weepers. Then add the blood-coloured foliage, and a very meritorious tree is obtained. It does not seem well known in nurseries as yet, so that would-be purchasers have no opportunity of securing it. Those who have it and wish to propagate it, could inarch it on any other Beech near enough to it for the purpose. If not now, a few suitable plants of green-leaved ones could be planted around it in the fall, ready for the work of inarching in the following summer. Inarching and grafting are the two principal methods of increasing Beeches.

#### **Are Plant Diseases Hereditary?**

A discussion of this question has lately occupied some of the readers of the "American Florists' Exchange," and Mr. F. C. Stewart, of the New York Experiment Station, contributes the letter which we print as follows: No plant disease with which I am familiar can properly be said to be hereditary. However, there are several fungous and bacterial diseases which attack directly the seeds, cuttings, bulbs, tubers, &c., used in propagation; and in such cases the resulting plants are exposed to infection almost from the beginning of their growth. The Bean pod-spot, or anthracnose, is a good example. A Bean plant affected by this disease may produce some perfectly healthy beans and some diseased ones showing brown spots. When planted, the healthy beans will produce healthy plants unless infection occurs from other sources than the seed. But the diseased beans are likely to produce diseased plants, for the reason that the fungus which is the cause of the disease is already present in the tissues of the seed in such close proximity to the stem of the seedling that the latter is almost certain to become infected. Thus, we have here not a case of heredity, but simply infection passing from seed to seedling in practically the same manner that it would pass from one plant to another. Carnation rust is caused by a parasitic fungus which thrives much better upon some varieties than upon others. Varieties especially susceptible to rust should be avoided by the originator of new kinds, because plants from the seed of such varieties are likely to inherit a tendency to rust. It seems to me very improbable that Carnation rust can be transmitted by means of the seed except in cases where the spores of rust are accidentally brought into contact with the seeds and adhere to them. This is not heredity. To the second sentence in the quotation from Professor Hartig I take exceptions. Diseased seed often causes loss in crops. In some cases the fungus causing the disease attacks the seed directly, like the Bean anthracnose, while in others the spores merely adhere to the seed, as, for example, the grain smuts. While it is true that with some diseases there is no danger of transmitting them by means of the seed, there are many others which are commonly disseminated in that way.

## Summer Bedding.

(Continued from page 202.)

The various wares of my business-pack were laid before the patrons of the Journal a week ago, and how to fit them together or describe a use for them will occupy a few moments erstwhile. Not to bandy words, and to adhere still to the concise form of treatment, the notes relating to the plants combined in the beds I have seen will be severely brief. These notes or descriptions are strictly a record of harmonious bedding effects, for use as a guide to those many readers of this newspaper who may never have had a personal opportunity to see the arrangements for themselves, and it may be well to remark again that ordinary bedding in private gardens is inferior to that in the larger metropolitan parks, and there are a number of reasons, good reasons too, why this may be. There are always some gardeners, however, to their credit it is said, who are anxious to improve their bedding effects, and to them such notes as these are doubtless useful. The park superintendents have not fruit crops to think of, nor have they to supply the cook with a continuous selection of vegetables, and a score of other things demanded of the professional private gardener, are not within their practice or province. One of their greatest qualifications and chiefest objects is to "bed-out" in the very best fashion, to create beautiful colour harmonies or effective contrasts, and to show the general public the possibilities of plants to present a pleasurable combination when chosen and grouped by one skilled in his art and tasteful in judgment.

To enumerate a few of the simple arrangements is our endeavour now. The old-fashioned and somewhat neglected *Calceolaria amplexicaulis* makes a fine bed by itself, edged with *Ajuga reptans purpurea*. The *Calceolaria* requires to be staked.

*Fuchsia Scarcity* (dark crimson flowers) goes handsomely with large, well grown plants of *Artemisia arborescens*, with Musk below, on the ground, and edged with blue *Lobelia*.

*Lantana delicatissima* I find is but little known. Grown to a single stem with the laterals developed, it and its mauve-purple flower heads are very effective. In Hyde Park, where these notes were taken, Mr. Browne has employed this with a *Ferula*-like plant, but which grows only 2½ ft high, named *Oreocome Candollet*; the edge was of *Alternanthera amœna*.

*Abelia rupestris*—nice graceful plants—with small samples of *Amaranthus tricolor* on the ground between the shrubs, and edged *Alternanthera amœna*, was handsomer and more graceful than I am sure these notes would lead one to suppose.

Crimson tuberous *Begonias* over *Koenigia maritima*, with *Grevillea robusta* enlightening the effect, and edged with *Lobelia pumila magnifica* (blue), was exceedingly pretty. At Hampton Court almost the same combination was seen, only that *Mesembryanthemum cordifolium variegatum* was used in place of the *Koenigia* (a dwarf, white flowering plant) and *Eulalia gracillima* instead of *Grevilleas*.

Foliage effect was secured in a round bed by the intermixture of dark-leaved *Cannas*, variegated Maize, and *Centaurea candidissima*. *Alonsoa incisifolia*, having blue *Violas* carpeting the ground, and an edge of *Alternanthera versicolor*, makes a very pretty bed. The *Alonsoa* may be grown 3 ft high and bushy, being supported by a stake.—D.

### "Business Illustrated."

We quote from the introductory note given in the first number of this new journal: "The especial function which 'Business Illustrated' has set itself to fulfil is the useful but unconventional one of supplying business people with a publication which stands midway between the trade and technical journals on the one hand, and the popular magazine on the other." This the new journal does admirably. It is a production which, given sufficient variety of contents, serious-minded persons will appreciate, from the fact that useful, even technical, information is imparted in interesting, readable form, along with abundance of illustrations. We observe that Messrs. Messenger and Co., the horticultural builders of Loughborough, are well noticed in the pioneer number of the paper, and the information in this article alone should commend "Business" (1s.) to workers in the greenhouse and garden. It will appear monthly.



*Maranta insignis.* (See page 213.)

## Mr. Henry Cannell, V.M.H.

Mr. H. Cannell hails from Swardestone, a small village near Norwich, and first saw the light in 1833. His parents were market gardeners, and there with his grandfather in his retiring life, the young grandson spent most of his time in the early '40's of the last century, in raising and growing Anemones, Tulips, Hepaticas, Primroses, &c., to send to market with fruit and vegetables. Thus he inherited the love of working amongst flowers.

In 1846, hearing that the streets of London were paved with gold, and having a strong desire to verify the truth of this, he migrated to the Big City, and to his astonishment found in Oxford Street that the said gold was only wood.

After a good many ups and downs to shake off his youth, we find him in 1855 in a gardener's situation at Berry House, Tulse Hill, and beating all other growers in London with Fuchsias, which were then highly popular. At the first show held in the arcade at South Kensington, he was again as victorious as before. Dr. Lindley, then Editor of the "Gardeners' Chronicle," spoke of one of his exhibits there as follows:

"'Gardeners' Chronicle,' 1862: Of Fuchsias an admirably grown collection was shown by Mr. Cannell. It consisted of medium-sized conical plants, every one of which nearly covered their pots with gracefully drooping branches laden with flowers. Than this group nothing in its way could possibly be more perfect, and it received, as it well deserved, universal admiration. Very much larger plants were contributed by Messrs. Webb, Gardiner, Harper, and Higgs; but as regards fine growth they were considerably inferior to those just mentioned.—Royal Horticultural Society's Show."

We find him exhibiting at the Great International Show held on what is now the site of the Natural History Museum. In 1866 he carried away the first prize there for six specimens, and on another occasion, after Mr. Bray, then gardener at Baron Goldsmid's, Regent's Park, had for ten years straight off carried off the first prize of £10 at the Botanic Gardens, young Cannell stepped in with six of his fine plants, 8 ft to 10 ft high, and changed the whole future of Fuchsia growing and exhibiting.

Further particulars of his eventful life will appear later, but would conclude meanwhile by referring to the fact that Mr. Cannell has just been awarded the "blue ribbon" of English horticulture, viz., the Victoria Medal of Honour, by the Council of the Royal Horticultural Society.





#### **Chrysanthemum C. W. Payne.**

This is a sport obtained from that very late white, Princess Victoria. It is blush pink, a pleasing tint. Late pink varieties are valuable for cutting purposes, and this is one of a very good type. The habit of the plant is capital, and the growth easy. It is the sort that will lift with a good ball of earth, and therefore one that is likely to be esteemed by market growers.

#### **Chrysanthemum Mrs. G. Carpenter.**

I am pleased with this almost discarded variety as a late pink. The colour is very dense and bright. The plant, too, has a bushy habit, and not over-tall. Its flowers, again, have quite a pleasing scent, much more noticeable than in the case of most Chrysanthemums. The blooms are of shaggy Japanese character, of medium size, and full. It should be tried as a cut-flower kind.

#### **Chrysanthemum Queen of the Exe.**

This variety has proved one of the best for market to bloom at Christmas. The flowers are like that popular white Nivus in build and size, but the great improvement in the newer variety is its freedom from attacks of the rust, whilst Nivus is one of the first to take it. The habit of the plant is good. It lifts well, and consequently one adapted for a method of culture now pretty much in vogue among market men. The flowers open slightly tinted, but when fully out they are of the purest white. It is a good one to last in a cut state, and the blooms are elegant in shape with fine substance.—H. S.

#### **English-raised Seedlings.**

"H. S.," writing in the spring time, did well to style the Hon. F. W. D. Smith as an uncertain variety. Has he ever seen a really meritorious bloom of this Japanese Chrysanthemum, I would ask? I have not only grown it and failed to produce a decent bloom, but I have never seen anyone else do so. There seems to be much wrong with its constitution. The colour is all that could be desired, but its lack of size and solidity is detrimental.—E. M.

#### **Regarding Sports.**

I know of but two instances where any contrary flower formation exists in a sport from that of its parent. These two instances are peculiar, and happened long ago. Mrs. Forsythe, reflexed, gave an incurved sport, John Bradner; and George Glenny, incurved, produced a reflexed variety, Mrs. Horril. In both instances the progeny retained colour identical with the parents. Is it right to call such as Ethel Amsden a flower at all? Is it not more a freak? It is a question unanswerable by the greatest scientist. It does seem a bit passing strange that there are so few sports now with so many varieties as compared with the number there were from ten to twenty years since. Take, for example, the quantity that sported in the incurved section only. The "Queens" and "Princesses," for example, were almost yearly giving instances of their adaptability to surprise the Chrysanthemum world. Edwin Molyneux was introduced from Japan by Mr. Cannell. Edith Tabor was raised from seed by Mr. Notcutt, the result of purchasing a half-crown packet of seed from Mr. H. J. Jones, a speculation that could not be regarded as anything but a profitable one; the variety is so charming and so lasting.—SADOC.

#### **The American Chrysanthemum Exhibition—Change of Date.**

The date of the above exhibition, to be held under the joint auspices of the Chrysanthemum Society of America and the Horticultural Society of Chicago, at the Art Institute, Chicago, was first set for November 4-8, but has now been changed to November 11-15 inclusive. This is the first exhibition attempted by the National Society, and the arrangements made for it by the local society are most satisfactory. The main exhibition hall is 60ft wide by 220ft long and 30ft high, with an annex 40ft by 80ft. The conference hall—a beautiful and commodious chamber—in the same building can be secured for meetings and discussions if necessary. More delightful and appropriate surroundings for the great Chrysanthemum renaissance of America could hardly be imagined, and the building is located in the very best section of the city for the accommodation of visitors of every class and from every direction. The preliminary list of premiums has been out some time, and copies of same may be had by addressing Edwin Lonsdale, Secretary, Chestnut Hill, Philadelphia, Pa., or E. A. Kanst, assistant secretary, 5700 Cottage Grove Avenue, Chicago.

## **The Culture of Richardias.**

Richardias kept in pots throughout the summer ought now, at the latest, to be repotted and started into fresh growth. Mix up some good, rich substantial compost of loam and manure with a free admixture of coarse silver sand. The plants are better for potting if the foliage has died down well, though if it has not completely withered up, it may be cut down to within a few inches of the surface of the soil, avoiding beheading any advancing young growth which may have started from the centre. Unless kept very dry the foliage turns yellow very slowly, and seldom loses its freshness altogether before new growth issues from the base. This, however, is immaterial. The main object must be to repot previous to much advance being made in the production of new growth, the plants suffering less from the necessary reduction of the roots.

On turning the plants out of the pots the balls will be found to be a mass of roots if the plants have been vigorous and healthy. The crocks originally placed in the pots as drainage will be completely surrounded with a network of roots. The ball may be sliced across above the crocks. If composed of several crowns each strong, divide into separate portions, reducing the soil and shortening the fibres of each portion to a convenient size for placing in pots which will hold them and admit of fresh soil working round. In the event of larger plants being required, those with several crowns may, after cutting away the crocks and loosening the sides of the ball of roots, be transferred to larger pots. Large pots can also be made up by introducing a number of equal sized single crowns, working soil between them and among the roots. The finest blooms or spathes are, however, produced from single crowns, providing they have been previously built up strong and healthy.

Lumpy material, either turf or flaky manure, should be spread over the drainage before introducing any soil, which may then be filled in and made slightly firm, but not raised too high for admitting the roots. Spread out loose roots, sprinkling soil among them, and make the rest firm by slightly ramming with a potting stick. When finished stand on a moist base of ashes in a partially shaded position at first. Give a copious watering to pass through the whole mass of roots and new compost.

For a short time afterwards it will be desirable to maintain the soil moist by frequent syringing rather than by heavy watering, but after the roots commence to push freely, and growth develops actively, supplies may be given when the surface soil dries. At this stage, too, stand the plants in a sunny position in order to develop them dwarf and sturdy. They are better in the open air until October, when it is necessary to accommodate them under glass in anticipation of the autumn frosts, which they are incapable of withstanding, even when only of a mild form, the foliage being extremely tender in this respect. This slight protection being afforded them, give all the air and light possible, and maintain the temperature cool, or they will grow more rapidly than is well for them.

If it is found that some plants are inclined to push flowering stems in November, encourage them to do so, as those plants which can thus early be induced to bloom remain with their flowers in a first-class condition for some time. They can also be induced to open their blooms better if provided with a little heat than they can with the same treatment later in the year. During the shortest days the blooms cannot be developed without a bottom heat of 60deg to 65deg, and the pots should be filled with roots.

Some growers of Richardias plant all their stock of plants out in the open garden in June in shallow trenches, so that water can be readily applied. The plants need but little attention until growth commences, when more water will be required in dry weather. The old withered foliage requires cutting away.

At the end of September or the first week in October lift and pot the plants. The size of pot will depend on the size of the ball of roots, but, of course, considerable reduction is necessary in order to conveniently admit them to reasonably sized pots. It is well to afford the plants a preliminary check about a week or ten days before lifting by running a spade round the clumps. Crock and have the pots in readiness, so that the lifting and potting may be expeditiously carried out.

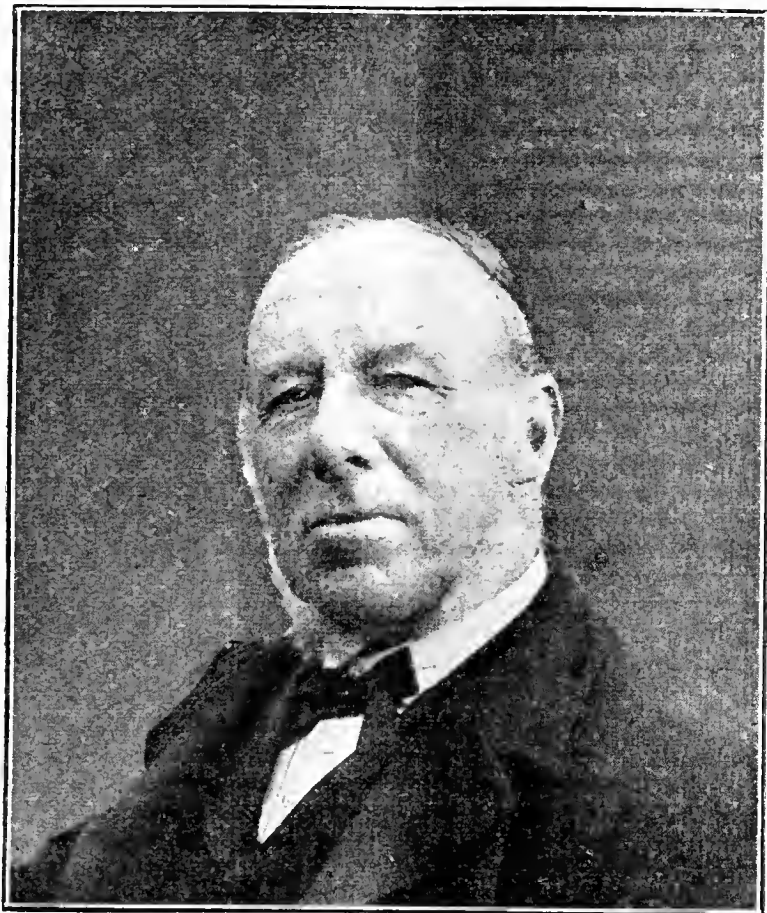
Pots, not usually less than 8in diameter, should be employed, unless small offsets were planted, which will require smaller sizes.

When lifted give a preliminary trimming with a sharp spade, and finish smoothing the roots with a knife. Cut the ball as near as possible the size of the pot, removing plenty of the base, or it will not be possible to place the ball low enough. Having introduced it into the pot it may be shaken into position by a series of jars on hard ground. Then place the pots in slight shade and water well. In a few days stand them in the sun, and should frosts be probable, place under glass or under a wall with temporary protection. The subsequent treatment is the same as for all-the-year-round-grown pot plants. Liquid manure may be given when plants are pot-bound.—S. DENNIS.

## Diseased Melon Plants.

Having seen a bad case of this troublesome pest, and from attacks of which, from my own observation, I have concluded few places comparatively are entirely immune, it may not be uninteresting to record my own experience with it. I do not remember ever having seen the disease treated on from a scientific point of view, and enlightenment in that direction would perhaps place preventive or remedial measures in our hands.

My first acquaintance with it was in a house, which up to a certain stage, I considered then and now, held the most promising crop I had ever grown. The varieties numbered seven, and the seed was obtained from three sources. The plants were grown in the old fashioned way—i.e., on a hotbed of manure, but with hot-water pipes underneath, and in good yellow loam of a somewhat retentive nature, but in no way greasy. I much regretted at the time I had no rubble to keep it open. The plants grew very strongly, but set a good crop, and the fruits were



Mr. Henry Cannell, V.M.H.

(See page 219.)

swelling finely, but excepting a little artificial in the top-dressing no manure had been given, and the white roots were much in evidence all over the border.

After a practically sunless week with heavy rains at the end of May, during which little water was given, I noticed the surface roots were fast disappearing, and on brighter weather making its appearance the plants commenced flagging, and ultimately collapsed entirely before the fruits were finished, which, as it was, were of good size, but naturally lacking flavour. I could not hear of any such collapse taking place before. It would seem as if the extra vigour of the plants, combined with sunless weather, which prevented consolidation of growth, made them an easy prey to disease. But how did it originate?

The following season I was in another part of the country, in a garden where I believe Melons had been well grown, but had not been satisfactory for a season or so past, excepting in heated pits where a good hotbed of some depth was employed, and these were, of course, summer crops. I may say, too, only one variety was grown, and seed had been home-saved for years. For a reason it is not necessary to state here, a fresh stock had not been obtained. A little seed, however, was procured from an outside source which was believed to be free from suspicion of disease.

The plants in earliest house were, with the exception of four or five, all raised from home saved seed. Perhaps I ought in fairness to say, these four or five occupied a somewhat better position when planted out than some of the others, although this in itself was not sufficient to account for the difference which afterwards ensued. Some time after planting I noticed a kind of rust on the edges of the lower leaves on all but those plants raised from what I may term foreign seed, and none of these so affected

had the same vigour as the others. The rusted leaves gradually assumed a burnt up appearance long before the fruit was ripe, the stems up to the first wire were quite denuded of foliage. Occasionally a leaf on the higher part of the plants would appear as if badly scorched by sun, although no general scorching took place.

Many of the young fruits directly on the commencement of swelling became pitted all over and turned yellow, and, of course, ceased swelling, making it a somewhat difficult matter to secure a crop at once, although there was an abundant set.

As time went on there was the same mysterious disappearance of surface roots previously noted, which could not be accounted for by strong liquid or artificial manures, and none, not even those plants apparently healthy would stand bright sunshine all day without flagging, which seemed to point that all were now affected. The fruits finished fairly well for an early crop, and were said to be generally of good flavour, but curiously enough while the ripening process was going on, from time to time I would find a fruit with the juice exuding from the netting, and on cutting there was an escape of gas, suggesting that germination had taken place. The flavour, too, was anything but pleasant, giving one the idea that cayenne pepper had been applied to the lips.

Was this the sequel to the disease? Does the actual presence of the germ of the endophyte in the plant set up germination in the fruit? I had previously heard of fermentation taking place in fruits on plants which had had to be shaded, and I believe old growers look on the shading of Melons as rank heresy.

Further, on five occasions we attempted to obtain a second crop from one house in the same season, and in each case it was more or less unsatisfactory. It did not seem to make a great difference whether the beds and soil were partially or wholly renewed. The latter gave the best results, but in neither case was it a success. It appeared inexplicable, except on the ground of infected house and soil, and, of course, the increased debility of the plants as the season progressed, as I think I may say the earlier batches were well up to the average in crop, size, and flavour, although obviously diseased. In no case either could we induce the plants to grow sufficiently strong to mature a good crop unless grown upon a bed of leaves and manure. The latter seemed to give them the necessary vigour to struggle against disease.

Eelworm was present in all the soil we used, but at no time did I see any Melon roots infected with it, although Cucumbers usually collapsed from the ravages of that pest.

I used sulphate of iron, both in soil and in the water, as a remedy, but the result was not very marked. My own experience would tend to show that the disease is primarily embryonic, but that, as well, infection can take place from without, probably through the medium of the roots, but to be certain on these points requires a far greater scientific knowledge than I possess.—D.

We reprint the following replies bearing on disease in Melon plants, which have been given on three several occasions:—

*Sclerotinia sclerotiorum*, Mass., is the stem canker of Cucumbers and Melon plants, "sudden collapse" disease of Potatoes and Tomatoes. On the latter it is frequently confounded with "black stripe," "drooping," and "sleepy" disease, and occasions the destruction of the plants in a similar manner. On the stem of the plant forwarded there were the white threads of the fungus, and in the destroyed portion of the stem oval-shaped black bodies, somewhat elongated—the sclerotia or resting stage of the parasite. The fungus subsists on organic matter, especially vegetable, in a dead or diseased state. Quicklime acts more promptly than chalk or limestone, and is the most effectual preventive of stem-choking fungus, also of root or root stem fungi. "Stone" is better than "chalk" lime, but the lime must not be "magnesian" unless for applying to land made sour by heavy manuring, or surcharged with vegetable matter, as bog or moorland. As a precautionary measure 1lb per square yard should be employed, slaking without delay, and whilst flourey spreading evenly and mixing with the soil to a depth of 4in to 6in. This should be done when the ground is in good working order, preferably dry rather than wet, and afterwards using another dressing of air-slaked lime at the rate of ½lb per square yard, say when the crop is above ground, or as soon as set plants become established, will prove thoroughly effectual against this fungus in the matter of Cucumbers and Melons; at least, such is our experience of them in manure-heated frames and in houses. In case of attack, seldom seen until the plants are too far gone to admit of remedy, but usually noticeable by their being checked in growth, the stem becomes rough at the collar, as if affected with dry canker, promptly use quicklime at that part and for 6in distance from the stem, when the soil being dry and the surface more or less open, some of the lime will pass into it and coming in contact with the mycelium destroy it. When the plants collapse, remove the roots carefully and burn the whole of the plant, then disinfect the places where they have been with quicklime, working it well into the soil with a fork. Infested soil should be dressed



with from 2lb to 3lb of freshly burned lime per square yard, and, after slaking, mixing with the soil to a depth of 4in to 6in with a fork. (September 3, 1896, page 241.)

The stem of the Melon plant above ground was perfectly healthy, but the root-stem had a swollen appearance, while the smaller roots were free from the nodosities indicative of root-knot eelworm (*Heterodera radicola*). We did not find this pest, but in the root-stem, embedded in the cellular tissue or between it and the woody layer, the root-stem eelworm (*Tylenchus obtusus*) was plentiful, and this we regard as the cause of "the plant failing at the root before the Melons were hardly ripe." The soil is of a very fibrous nature, and in that the eelworm has possibly been introduced. We advise the careful removal of the root-stocks and burning them, then either soak the soil with gas liquor diluted with five times the bulk of water, or soluble phenyle, one part in 240 of soft water, or scald with boiling water. We have also found great benefit from the use of quicklime, about 2½ per cent, mixed with the soil in stacking, leaving until the herbage was completely dead. (August 11, 1898, page 116.)

The tubercles on Melon plant roots are caused by root-knot eelworm (*Heterodera radicola*), a minute creature about one two-hundredth inch in length in the adult stage. We failed to find the "worms as enclosed a box and the few killed by lime water." Possibly they were species of white worm, which are often associated with decaying vegetable matter, and may sometimes accelerate, if not actually cause, the destruction of living tissues. All the eelworms we found—eggs, cysts, so-called larvæ, free males and gravid females—were alive, and in no way affected prejudicially by the lime water if it had been used to effect their destruction. We mention this as you say "worms killed by lime water." We still find Little's soluble phenyle the most effective against these pests when the plants are growing, applying as in an ordinary watering at the rate of a fluid ounce to 3gals of water, repeating occasionally. A grower badly troubled with eelworm uses the phenyle at the strength quoted before planting and afterwards at half strength, or one part in 960 parts, and secures good crops of both Cucumbers and Melons where they were formerly failures. For general disinfection there is nothing better than scalding the soil and bed walls with boiling water. Where this cannot be done use 2lb of best freshly burned chalk-lime per square yard, slake, using as little water as possible to cause the lumps to fall into powder. Let it lie overnight, then work in with a fork a foot deep, taking small spits, and in a day or two apply half a pound kainit per square yard, forking in similarly to the lime after forty-eight hours. This should be done some time in advance of planting, or as a disinfectant when the plants are cleared. (September 22, 1898, page 236.)

## Pansies and Violas.

The value of Pansies and Violas for the decoration of beds and borders should not be overlooked. They are especially bright and floriferous in spring and early summer. Frequently they will continue all the summer to produce flowers. In a season like the present it is noticeable that the Pansies and Violas have succeeded admirably in producing a welcome succession of blooms. The Pansies, however, are not so fine as early in the season, the tendency being for the blooms to become smaller after the first lot, Violas are better adapted for summer flowering, and for this reason are employed in bedding arrangements and as edgings to borders. There are no better flowering plants for spring bedding than Pansies and Violas. The latter are often termed tufted Pansies. The blooms differ in usually being of a self colour with a distinct eye in the centre, and are of medium size. Pansies have blotches of colour on the three lower petals, usually of a dark colour, with a margin of another colour, the two upper petals being the same colour as margin, though sometimes the colour is suffused, veined, marked, or splashed. The whole flower is larger and more imposing, and the habit of the plant more straggling.

The season for propagating or preparing for autumn planting is now at hand, and a few notes on the various methods of preparing plants may be acceptable. Where there is no stock to fall back upon raising plants from seed is an admirable method. The seed is best sown in July and August. Sown now it should be in pots or shallow boxes under glass. Seedlings are pricked out when the third leaf is formed, from which time they will proceed to strengthen rapidly. Prick them out either outdoors in the open, or in frames or boxes. Vigorous seedlings put out now will make fine, sturdy plants for autumn planting. Seedlings ready for treatment may be purchased, or young stuff ready for final planting obtained later on. Autumn planting is not indispensable, therefore seedlings considered too small may be wintered in a frame and planted out in March or April following.

Division of the old plants is another method of increase. The flowering growths ought to be cut away some short time previous, thus encouraging new or sucker growth from the centres. When this is fairly developed lift the plants and divide into portions with roots attached. These young growths appear rather weakly, but if furnished with a fair number of healthy roots young and strong plants are soon produced and established. At the time of division, if they cannot be placed in permanent positions for flowering they can be transferred later or in the spring. Break up the ground well, adding a little decomposed manure, leaf soil, and wood ashes. The last method of increase is by cuttings. This plan is adopted when a stock of a particular colour or variety is wanted in quantity. Cuttings may be inserted in October in frames. Make up a bed of soil, which should be rather sandy near the surface, or surfaced with a layer of sand. Procure the slim growths from the base of the old plants, and prick out each singly 2in apart in rows 2in or 3in asunder. But little preparation of the cuttings is needed. Some will have small rootlets, the shortest being the best. See that each cutting is placed at the bottom of the hole made for it, which should be done with a blunt stick. Press the soil closely round, and when all is finished water well with a rosed can. Slight shade from strong sunshine is necessary. Place the lights on the frame, and keep close until the process of callusing has taken place—that is, a swelling at the base of the cutting. The cuttings will then remain fresh until roots form and ramify in the soil, during which time plenty of air should be given on favourable occasions. The plants may be placed out from the middle of March to early May, but always before they are likely to be affected by hot weather.—E. D. S.

## Tilgate House, Crawley.

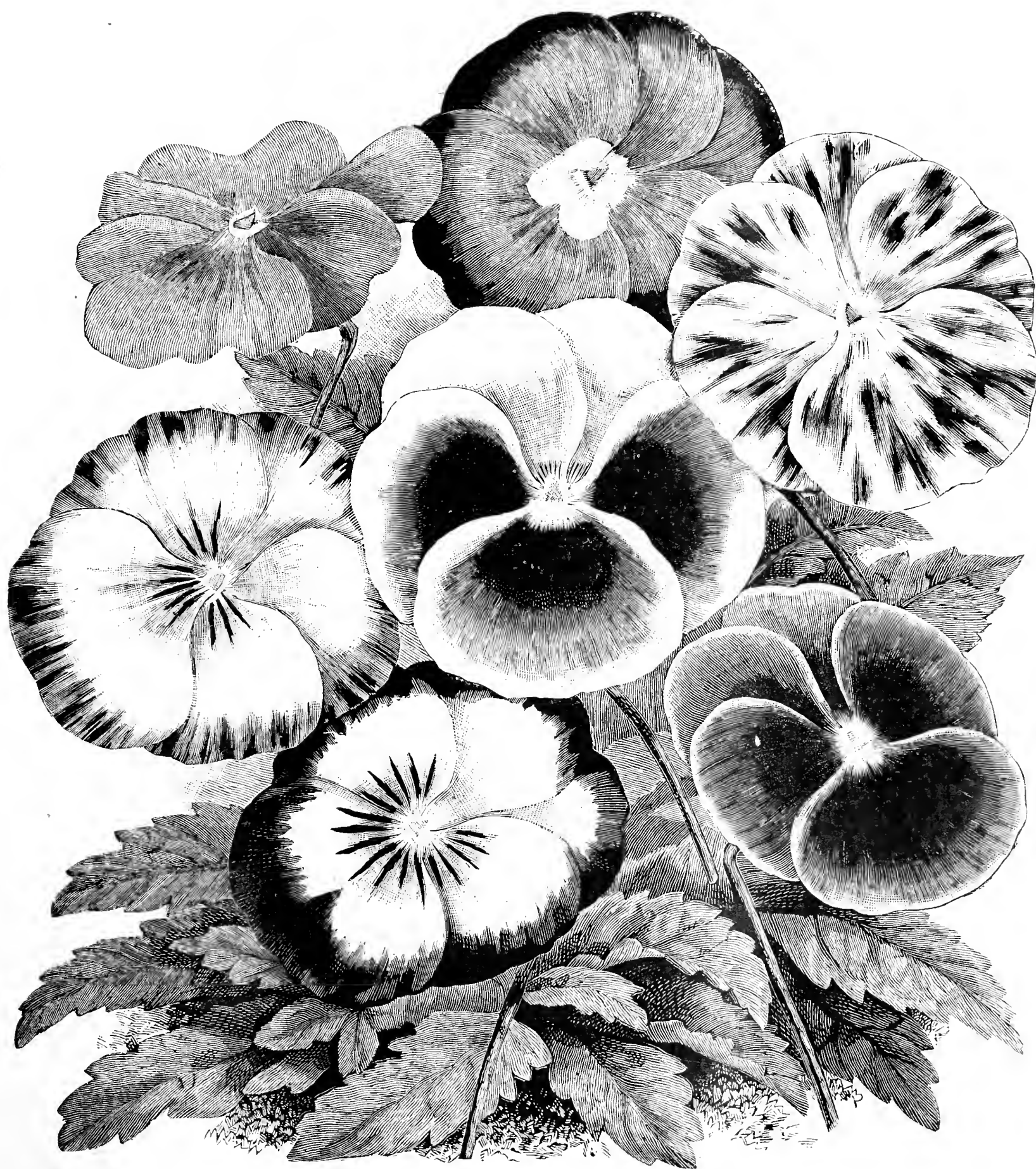
The Weald of Sussex to the south of them, the Kentish North Downs in front of them, and unending view over forest, and mead and moor on right and left of them, the owners of Tilgate House, near Crawley in Sussex, enjoy that freedom, the fullest and best, which one involuntarily associates with such happy homes in rural England. Mrs. Nix and her two sons have indeed a beautiful estate, the residence situated nobly on an eminence not too much exposed, yet splendidly free, with shrub-dotted lawns around it, and a long smooth lake within a stone's throw in the valley which rises to form a Larch-clad belt upon the south. Everywhere on the southern side The Forest spreads, and bridle tracks, like sheep runs on a hillside, weave connections through the thousands of its acres. The cross-leaved Heath and the handsome Bracken flourish rampantly on every side, even beneath the shade of the full grown Larch trees, while in the open inclines, they predominate exclusively.

Tilgate House was visited in a hurry, for it is the way of some folks to attempt more than ought to be accomplished within the span of hours twenty-four, and I am one of them. But even he who runs could enjoy the delights of the lengthened drive through part of The Forest from Three Bridges railway station on the east side, and as the "House" was gained, the associated features of the beautiful Sussex vales intensified the interest and pleasure.

It was one of those hot summer days when the cattle in the meadows do nothing but chew their chud, and swish their tails to scare the flies; when haymakers swelteringly tussle the grass, and commotion has ceased. It is then that "Jack Rabbit" comes forth from his burrow, to coquet with "Bunnie" from over the way; he doesn't then mind the gun of the knowing gamekeeper. In the shady stillness of the darkened forest, robin red-breast is there, and maybe the wood dove too, or the crack-voiced male pheasant; and out in the sun the butterflies flit, or in the shade the dipterous kinds.

Tilgate House is built of light sandstone. It is thus cheerfully bright. The Douglas Firs have flourished well on the lawns surrounding it; not less so the Scottish Pine. There, too, is *Pinus insignis*, a very handsome tree and quite a picture. Near to the house stands an aged Tulip Tree, full 80ft in height. Some years ago this handsome favourite appeared ill in health, but Mr. Nix and the skilled head gardener, Mr. Edwin Neal, prescribed a simple and effective remedy, that of supplying more nourishment in the form of a top-dressing to the roots. It now is full of life and odorous blossoms. Lime trees do well, and there are some rich toned Purple Beeches in the grounds. From the north front there is a view of Leith Hill, a prominent landmark near Dorking, and the village of Hockstead lies in the same direction.

Among flowering shrubs that luxuriate, none excel the massive clumps of Rhododendrons, whose roots find nurture in the peaty soil. By a mossy path among the Beech trees one saunters to The Wilderness, a place where Nature is unbridled, yet adorned by additions to her own productions. Heaths and Ferns, and lovely grasses are hers; man (the gardenman) has



PANSIES AND VIOLAS (See page 222.)



added just a little. Here a *Phyllostachys*, there a mass of Crimson Rambler Rose, some groups of Golden Elders, and anon a batch of named distinctive *Rhododendrons*, and each harmonises. By a pretty cascade in this Wilderness scene, there are more Bamboos and broad-leaved herbaceous *Gunneras*, and completing the perfection of the features, we find the beautiful Japanese *Iris*s. These have become fully established, as have also the Bamboos in variety, and other shrubs as well. The grace of the Dragon-flies among the Reeds and Water Lilies, rivals the pleasure one has in seeing the red-skinned gold fish in the limpid depths of water, or the snow-white swans gliding over its glassy surface. The Water Lilies are *Marliac's* hybrids, and are now thoroughly established here.

*Liliums* are another speciality at Tilgate, and one may see many little grouplets peeping up from the edges of the *Rhododendron* and shrubbery belts. Mice prey upon the bulbs even out here in the open, but a very fine wire netting around each lot tends to save them. I noticed *Lilium Browni* doing handsomely, and others were *excelsum*, *croceum*, *giganteum*, and *Henryi*, the latter seemingly as fine as any in the open. Named *Rhododendrons* I have referred to, and among them *Pink Pearl*, the loveliest and best of all the hardy hybrids, was seen in robust health. Groups of *Penzance* hybrid Sweet Briars, with beds of fine-foliaged Japanese *Acers* further added quality to the general collections.

*Azalea mollis*, in variety, have recently been liberally planted in the new American garden (a term that is almost in desuetude now) which is being formed. It is very satisfactory to know that both the Messrs. Nix are keen and experienced at gardening. Mr. John A. Nix is a member of the Floral Committee of the Royal Horticultural Society, and Mr. Charles G. A. Nix sits on the Fruit and Vegetable Committee. The collection of fruit shown in the Drill Hall last September from the fruit ranges at Tilgate elicited much comment, and a Silver Knightian Medal was awarded for it.

Hardy flowers are not greatly in evidence, but there is an interesting little rockery which contains just those rare tit-bits, showing it to be in the hands of a real lover of Alpines. Hardy fruit on the open walls are growing and bearing in a manner which shows that skill is brought to bear on their culture. The soil by the walls in which they are planted is all "forced"—that is, it is specially selected soil brought and put there. Whenever the estate carter is out and about, if his cart is to be empty on the homeward journey, he has orders to seize the opportunity and bring back road-soil or turf parings if the latter are found.

Cherries were heavily laden, all varieties alike. Governor Wood and Black Tartarian are favourites and much grown. Pears and espalier Apples form quite a feature. Strawberries are grown under permanent screens which are 6ft high, the supports and rails being of iron. Roses are excellent and plentiful in the borders, and vegetables, too, are well attended to.

Indoor fruit is placed in the forefront at Tilgate, and many handsome houses with their trees and crops are to be seen. Mixed houses of Vines, the latter carrying heavy bunches and so many as sixteen and seventeen on each rod, were excellent in June, and no doubt London folks will be able to see some of the samples before long. All of these are certificates of able cultural attention. Muscat of Alexandria, even in June, was richly coloured, and it is seldom one sees the amber tint even at a later date.

In a new lean-to house, admirably erected by James Gray, of Chelsea, a number of standard trees have been planted in the centre of the border, their branches being trained up the wires towards the top. What is the object? This, to make the most of space: for while the younger trees are being trained from the bottom upward, and gaining space, the top portion of the roof is yielding a crop. The standard trees will come out in a couple of years, or less. So many as 1,000 fruits are yearly sent to the owners during their stay in Scotland.

Roses under glass are another feature worthy of remark, *Mme. Lambard*, *Anna Olivier*, *Maréchal Niel* and *Niphetos* among many others, being robust and prolific of blossom. Palms and decorative plants, both in the ranges and in the conservatory attached to the house, are varied, clean, shapely. Carnations and *Gloxinias* among flowering plants seemed to be popular. And so the visit, though brief, was very pleasurable, the more so as Mr. and Mrs. Neal did everything to add to the enjoyment of it. Tilgate House is quite in the country—I had almost said the wilds of the country, but it is hardly that—but just far enough out from towns and villages to make it truly rural and agreeable to those, who, like the owners here, can appreciate the charms and interest of the country and what it contains, because they have studied and understood something of it. The journey by foot through the aforementioned Forest (an old historic forest) was boldly undertaken, and though I had Mr. Neal as guide over half way, thrice, like the babes in the wood, was I lost, though not for long. Thus, au revoir.—J. H. D.



### Pears Destroyed by Grubs.

I am much obliged for information supplied through the Journal re the Marie Louise Pears eaten with grub. With regard to the strips of tin cure, I am afraid that would be a very laborious cure in the case of a gridiron trained tree some 8 yards long on wall. However, I shall try the kainit and the removal of the top soil. Had it not been for this pest I should have had some 400 fruits of Marie Louise, whereas there are about two dozen left. As I mentioned previously, *Doyenné du Comice* and *Williams' Bon Chrétien*, on the same wall, are untouched by the fly in question, but pyramids of the same and *Louise Bonne* have suffered in the same way.—W. SCOTT.

### Theoretical Training: A Defence.

May I again be allowed to trespass on your space Mr. Editor? In extenuation, I may say it is directly due to "An Old Boy" and one of his protégés that I ever possessed the necessary temerity to figure in your columns. Did not the former petition you in those articles I referred to last week for space for our then 'prentice efforts? I am glad "An Old Boy" read my contribution in the spirit in which it was intended, and I thank him for his kind, fatherly acknowledgment and good wishes, and hope we may again hear from him at some future time. I thought, however (I hope I am not mistaken), the sentence in "Kepouros" article, which runs: "The dingling sound of triangles—a sic unchristian, not to say uncabbage-like learning—leads to a peculiar form of mental aberration immensely inimical to the right about attention so necessary in the duly equipped practitioner in the art of gardening," seemed remarkably like an insidious "by break." Though in no way wishing to score off it, I must, in self-defence, endeavour to play it, and keep my end up with a straight bat.

Directly I read it I began to suspect him of being—a pro-Boer? Oh dear no! his letter would tend to point the other way—but one of the "horticultural Joshuas," into whose aspirations (!) with regard to the "Sun of knowledge" a correspondent gave us an insight some time ago. If we pleaded guilty to the indirect impeachment of conceit in one thing above another, it would be, perhaps, that we were level-headed, and endeavoured to see both sides of things as they are, and not as we would have them, that is, of course, those things over which our individual or united efforts can have no control; and we are not aware that any knowledge we may have acquired has in any of us produced that species of mental aberration with its attendant baneful effects to which "K." refers, and on which, apparently, he is well qualified to express an opinion. We certainly do not wish it to be assumed that we have imbibed so deeply at the classic fountain as he appears to have done, nor had we in our mind the probability of the various exigencies arising which he named, and for which he evidently is prepared, and which we therefore resign to his greater learning.

It may be that he is best acquainted with those—pardon me if I introduce the dingle once more—triangles, whose angles are said to possess the quality of obtuseness, and that consequently the metaphor I used was just a little far-fetched for his mind. I will not tire your readers by rendering it as it should be literally. We did, however, in our poor, simple-minded way, think it just possible we might be asked to work out a geometrical design in the parterre, or mark out an elliptical bed in the pleasure, or may be, an exact square might be wanted for a tennis or cricket ground, with, perhaps, a calculation as to quantities, levels, &c., or we might require to know how much head room a certain length rafter would give us in a house of stated width, and it may be, a plan to scale might be required for some proposed structural alterations we might like to effect, and in our aforementioned poor, simple-minded way, we concluded that a knowledge of geometry and kindred subjects would assist us in those little difficulties, and this too, as our friend puts it, "needs no demonstration, but is a self-evident truth." Further, we both hold and assert that a gardener first and foremost must be essentially practical, and this we have demonstrated in ourselves to the satisfaction of those whom it most intimately concerns, but, unfortunately for us, the testimony of practical men of high standing does not rank as influence in securing situations, nor do we find it such in effect.

The knowledge, too, which we may have gained is to the cultured mental palate decidedly cabbage-like, so much so, that at times we would fain that peculiarity had been less pronounced,

and that circumstances had given us opportunities for it to have acquired, as it were, a rounder, and more delicate flavour. Does it not appear to "Kepouros" (we really wish he had adopted a more intelligible nom de plume) that the palliative—savouring of wormwood—which he suggests to the "faithful genera" (men who are on their beam ends, and who, when in regular employ, have been privileged to earn barely more than sufficient to buy the necessities of life, with the addition, perhaps, of a few valued books, leaving just a margin for sickness and misfortune) that palliative, I say, is a trifle "unchristianlike," I might almost say gratuitously insulting to them.

Time and again we are told by those best qualified to know, that it is not the skilled artisan, or the clever professional, who are wanted in South Africa, but the man with at least some few hundreds capital. Horticulture (I do not mean that kind which grows Cauliflowers at 1s. 6d. a time, although the exigencies of bread and butter for the wife and weans may compel us to resort to it, and which in no way do we wish to pooh, pooh) horticulture, I take it, is the natural outgrowth of a prosperous, not to say luxurious age, and which, from the professional point of view constitutes its great weakness. When the Rhodes, Beits, Barnatos, &c., have made their millions, they commence buying or building mansions, acquiring estates and works of art, and forming gardens, but mark you, not in South Africa, nor are there yet any indications of them so doing. Those who are in South Africa are there not with the idea of spending money, but of making it, either out of the necessities of life, or out of other peoples' labour—this latter infinitely the easier plan to the capitalist. Even in America, a country of much older growth, it is only within recent years there has been so much progress in the direction of high-class gardening. Of course, it might be that our horticultural emigrant would be content to find temporary employment underground in that horticultural paradise (I believe white men are now being given a monopoly in that kind of work at 5s. a day, and which sum, I am told, will purchase a very respectable dinner, I don't want any awkward questions asked about the other meals), and in which work, although intimately connected with the soil, he would hardly find bearing for his "Cabbage-like learning," but we reflect, had he "sedulously imbibed" of the waters of geological and perhaps metallurgical research, he might much sooner be in a position to acquire the necessary capital for his big horticultural effort. To some of us, eminently practical perhaps in other respects, gardening is not altogether a means of obtaining bread and butter, but a kind of terrestrial heaven, in which we find a species of happiness unobtainable outside of it, and the thought of an existence other than along the road on which we have been travelling, and at the end of which we hope to attain our ideal, or something approaching it, would be extremely painful, and that is the reason why we keep pushing on and—NEVER DESPAIR.

### Horticultural Lecturing and Judging.

As autumn is now fast approaching when County Councils and other bodies will be busy selecting men as horticultural lecturers, I think this an opportune time to impress upon them the necessity of selecting men of practical experience, consequently who know what they are talking about. Of course, I am fully aware that the great majority of men so engaged are the right men in the right place; at the same time I have in my mind an instance of a man engaged by a public body in the Midlands to go about lecturing on horticulture to amateurs and cottagers, and who even has the audacity to judge at flower shows, who never had a month's training in a good garden in his life, neither amongst vegetables, fruit (inside or out), nor yet the simplest forms of stove or greenhouse plants. That these public bodies are innocent of any intention of selecting any but the best men I verily believe, but not, in many instances, being practical horticulturists themselves, they are too often carried away by high sounding titles, the "gassy" utterances and assuming manners of applicants, instead of subjecting them to a severe practical test, in which case their ignorance would be demonstrated, and amateurs and cottagers would be saved the trouble of listening to men whose horticultural knowledge is less than their own. The same remarks apply to judging at flower shows, I mean the smaller flower shows; because I know the larger ones are managed by men of experience, whose judges are experts at growing the things they are called upon to judge; but not always so at these smaller shows, which are often managed by men of business, who have a commendable love for their garden, and are ardent supporters of horticulture. These men, I have no doubt, are sometimes unintentionally carried away by the alluring title of F.R.H.S., &c., hence the mistakes occur that I have alluded to, mistakes which, in the interest of horticulture, it is always wise to avoid. The importance of a wise expenditure of public money, and the putting of the right men in the right place, is my only excuse for troubling you with this epistle.—HORTICULTURIST.

### The Destruction of Unhealthy Plants.

Mr. J. Ollerhead, an old Journal correspondent, whose paper on the Microscope may have been read with interest by many, writes as follows:—"I would be glad to know if any of your readers has any experience with the pests *Macrobolus Hufelandi* and the *Oribata demersa*, which are quite new garden enemies to me. At the same time I have been for years convinced that thousands of plants are annually consigned to the rubbish heap both by gardeners and nurserymen, and too often a great many of them of considerable value, and that without knowing the cause of their disease or unhealthy condition. The cultivator, or the man in charge of them, gets the credit of neglect or unscrupulous use of the water-pot, whereas, if the plants were submitted to a thorough investigation of the microscope, the hidden mysteries of insects or disease would be revealed in such a way that would exonerate the cultivator from the slightest tinge of blame. If you think it worth while to ventilate this through your columns, it may be the means of benefiting both the employer and cultivator, and cause the former to make a closer investigation before blaming the latter, and thus do a public service in the right direction." Has Mr. Abbey, or any scientific reader, any experience with the subjects named by our correspondent?

### High Jinks in Ireland.

I beg your pardon, Mr. O'Neill! That puts us right at starting. But is it possible? Can it be, I wonder? Ahem! Excuse my "imperence," but is there not a little—a very "leetle" mistake anent that picture of *Cordylina australis*, on page 205? I hear that you have had high jinks in Ireland. Your unique horse show; your admirable flower show; fine sport on your splendid new racecourse at Ashtown; good running on the excellent old one at Leopardstown; and a new Lord-Lieutenant you have got, or, at least, will have him when you get him. Why tarried the wheels of his Excellency's chariot when he was so much wanted for the gala week? Oh! it was rare old times, I hear, and what with "purty" colleens hovering about, potteen flying around, and elegant Potatoes at sixpence per stone, small wonder that the littlest of little errors might creep into Irish correspondence. But, mind, I don't say it did; yet, certain sure, that *Cordylina australis* both in foliage and flower is different to the many fine specimens seen during a prolonged visit to the Emerald Isle. The foliage, as depicted, is so much like *Dracæna Lindenii* (stove plant), and the flower spike so much unlike those heavy, drooping, massive, ramified heads usually borne by *D. australis*, that I think—I thought—it possible, just barely possible, you know, that a little, very little, error had crept in. Then, too, the camera, I have been told, is an awful l——r. It is, I believe, not guiltless of telling a few, judging from the view taken of a small pond, where each yard of its length appears as a mile in the photo. Anyway, I don't want any blackthorns humming around, so if I am wrong, I beg your pardon, Mr. O'Neill, and that puts us right at the finish.—Quiz.

### Plan Drawing Competition.

Enclosed is an advanced copy of our competition for under gardeners for next year. Whereas the piece of ground last year was 20 acres, that this year is about 3 acres. I found that last year some people read the description as indicating an actual piece of ground. Both last year and this year the plan is wholly imaginary. I shall be very glad if you will again make this matter public in the interest of the young men for whom the competition is intended.—P. MURRAY THOMSON, Secretary to the Royal Caledonian Horticultural Society, 5, York Place, Edinburgh.

We print the instructions for the plan competition as follows:—"For a plan, drawn to scale (16ft to inch), for laying out a piece of ground about 3 acres in extent, as shown on the sketch plan, which the secretary can supply on application to him. The dotted contour lines show the elevations, in feet, of the ground to be laid out and of the adjoining properties. The ground is to be laid out suitably for a suburban residence garden. The glass may be conservatory, forcing-house, and cool greenhouse, with the necessary frames, heated or unheated; and the fruit house is to be either vinery or Peach house, in the option of the competitor. A lodge may be provided as a gardener's house, or a gardener's house may be placed otherwise, or in addition to a lodge. The estimated cost of laying out is not asked for on this occasion, but in future it will probably be required. First, 60s.; second, 40s.; third, 20s. The first and second prizes are given by Sir John Gilmour, Bart., Montgrave, and the third prize by the society. On each plan there should be a short explanatory key. Each plan and description must bear a motto and be accompanied by a sealed envelope bearing the same motto and enclosing the competitor's name and address. All plans for this competition must be in the hands of the secretary, Mr. P. Murray Thomson, 5, York Place, Edinburgh, not later than April 1, 1903."



# NOTES & NOTICES

## An Observer's Notes.

I have for many years noted that very rarely do we see the swift after about August 10, 11, or 12. I saw one as late as the 25th this year, which, I think, is unusual.—A. BAKER.

## Appointment.

Mr. Alexander McMillan, till recently, and for four years, the successful Chrysanthemum and Rhododendron grower at the Camphill Houses, Queen's Park, Glasgow, as superintendent of the Christie Park, Alexandria, N.B. His many friends will wish him success in his new charge.

## Decrease in Hop Cultivation.

According to a return just issued by the Board of Agriculture the acreage under Hops this year in England is only 48,024 acres, as compared with 51,127 and 51,308 acres in 1901 and 1900 respectively. Of the nine counties specified Suffolk stands at the bottom of the list with 4 acres only, the same as in the past two years; Gloucester has 46 acres, the same as last year, and 1 acre less than in 1900; while in Kent alone the falling off amounts to about 1,400 acres.

## Mearns Horticultural Society.

The forty-third annual show of the Mearns Horticultural Society was held recently at the Public Hall, Newton Mearns, and again proved a distinct success. This old established show still holds its place as one of the foremost in Scotland. The prominent feature of the show this year was a magnificent show of Roses by Mr. Hugh Dickson, Royal Nurseries, Belfast, consisting of over 150 splendid blooms, and was deservedly awarded the gold medal of the society by the judges, who expressed their unqualified admiration of this splendid exhibit.

## Torquay District Flower Show.

The Committee of the Torquay District Gardeners' Association regret that, owing to lack of funds, they are compelled to cancel the schedule for the annual Chrysanthemum show fixed for November 5, with the exception of the special prizes, classes 29—33. It is, however, intended to hold a show on the same day for honorary exhibits, and it is hoped that the friends and supporters will endeavour to send as many exhibits as possible in order to make the show a success. For any further information apply to Geo. Lee, Hon. Assist. Sec., The Lodge, Upton Leigh, Torquay.—R. P. KIRSON, Hon. Secretary.

## Death of Mr. James Percival.

Many readers of the Journal will learn with regret, more especially those residing in the border counties of Lancashire, Yorkshire, Derbyshire, and Cheshire, of the death of Mr. James Percival, who up to the time of his decease was one of the most impressive figures to be found at the various gatherings of botanists held in the above counties. For a great number of years he was president of the Manchester Botanists' Association, and a useful and highly respected member of the United Field Naturalists and kindred societies. Mr. Percival belonged to a family imbued with a strong love of Nature, and possessing, one may say, an instinctive desire to understand thoroughly the forms of life by which each was surrounded, his grandfather being one of the pioneers of the scientific study of botany in Lancashire, and from him Mr. Percival inherited his strong desire for the complete study of plant life. He possessed a most remarkable memory; a plant once seen by him was never forgotten. He was a modest, but a most ardent botanist, delighted and ever ready to impart to learners, with fluency and accuracy, both the English and Latin terms for the species, genus, and order of each floral specimen, the origin of its common name, habitat, medicinal qualities, or some hoary superstition that may be attached to it. He travelled in his spare time over the greater part of the British Isles in search of plants, and cultivated in his garden at Smithy Bridge, near Rochdale, many of the rarities he had gathered in his rambles. He was laid to rest at Prestwich, at the ripe age of seventy-four, in the presence of many friends and fellow botanists, on the 21st ultimo. "He had no favourite flower, but loved them all."—J. N. M.

## Our Bulb Number.

The bulb number, of which particulars are published on one of the advertisement pages in the present number, will appear on September 18, and not in conjunction with the report of the fruit show held at the Crystal Palace. The alteration will allow greater space for our illustrations of bulbous plants and flowers, and the articles of a special nature in connection with them. It will allow free our pages for the fuller reporting of the Palace show, and matters pertaining to fruit culture.

## Crystal Palace Fruit Show.

The Royal Horticultural Society's great show of British Grown Fruit takes place at the Crystal Palace on Thursday, September 18, and the two following days. Copies of the prize schedule with entry form can be obtained on application to the secretary, R.H.S., 117, Victoria Street, Westminster. Intending exhibitors must give notice in writing not later than Thursday, September 11, of the class or classes in which they propose to exhibit, and the amount of space required. On each day of the show after 10 a.m. Fellows of the Society on showing their tickets at the turnstile will be admitted to the Palace free.

## Temple House Gardens, Great Marlow, Bucks.

The register of rainfall here for August, 1902, was 3.65in; the highest maximum was 78deg on the 28th, and the lowest minimum 43deg on the 1st. The highest maximum for August, 1901, was 83deg on the 10th, and the lowest minimums were 44deg on the 10th, 21st, and 28th. The rainfall for August, 1901 was 2.35in. There was thunder on the 19th, heavy showers on the 6th, 7th, and 26th, a foggy morning on the 26th, and a very dense fog on the 27th. We are on the banks of the River Thames, and 105ft 9in above sea level.—GEORGE GROVES, Temple House Gardens, Great Marlow, Bucks.

## Sussex Weather.

The total rainfall at Abbots Leigh, Haywards Heath, for the past month was 4.18in, being 1.77in above the average, the heaviest fall was 1.15in on the 18th; rain fell on twenty-one days. This record was exceeded in August, 1891, when 5.83in fell on twenty-five days, with a very much lower mean temperature than we have had this year—viz., 57deg, and again in August, 1881, with a fall of 4.63in. The maximum temperature was 80deg on the 16th; the minimum 42deg on the 2nd. Mean maximum, 70.22deg; mean minimum, 52.27deg; mean temperature, 61.24deg; which is 0.19deg below the average. The rainfall this month has been more remarkable for its persistent small quantities than for the amount as a whole. It has been favourable for the growth of green crops, and that is about all. Harvest has been in slow progress for some weeks, very little yet carried, and I fear much of the corn will be only fit for feeding purposes.—R. I.

## Croydon Gardeners' Outing.

The annual outing of the Croydon Gardeners' Society took place on August 27, the places selected being Paddockhurst and Worth Park, Sussex. The members left Croydon at 8 a.m. by brakes, and after a delightful drive of twenty-three miles, arrived at Paddockhurst, where they were met by Mr. Wadds, gardener to Sir Weetman and Lady Pearson. Mr. Wadds escorted the party through the beautiful gardens and grounds under his charge. Note was made of many objects seen about. Before leaving, three hearty cheers were given Sir W. and Lady Pearson for their kindness in permitting the members to visit their charming place; also to Mr. Wadds for his courtesy to all present. An adjournment was made to the Red Lion, Turner's Hill, where a capital luncheon was served. Here the health of Sir W. and Lady Pearson, and Mrs. Montefiore, of Worth Park, was drunk with musical honours. Luncheon over, a pleasant drive brought the party to Worth Park, where Mr. Allen, Mrs. Montefiore's gardener, received the members and piloted them through the beautiful garden and grounds under his charge. Many most interesting notes were made for future use at the Society's meetings. Before leaving Worth Park, three ringing cheers were also given to Mrs. Montefiore and to her courteous gardener. A drive to Horley brought the party to the Chequers Hotel, where an excellent tea was served on the lawn. After a rest here, the horses were put to, and a good drive homeward brought a most enjoyable outing to a close. The weather was all that could be desired.—J. G.

## Societies.

### Royal Horticultural—Drill Hall, Sept. 2nd.

Owing to the National Dahlia Society having the use of the Drill Hall, the meeting of the Royal Horticultural Society was confined to a few small exhibits of plants and fruit. A boxful of Victoria Apple, which somewhat resembles Lord Suffield, came from Messrs. Cross and Son, of Wisbech. Mr. G. Shawyer, Cranford, Hounslow, sent a number of fruiting branches of Tomato, Cranford Prolific, which well deserves its name. One of the clusters bore eleven full-sized and firm fruits. A Cultural Commendation was accorded. Some Melons were exhibited, but none call for comment. Sir Walter Gilbey, Bart., The Orchards, Elsenham, Essex, contributed four sorts of Cherry-Plums, the yellow, the red, and two seedlings, one a dark red, the other yellow.

Messrs. Grieve and Sons, Broughton Road, Edinburgh, sent their strain of bronze Violas, which are pretty on a sunny border, but are dingy in bunches for the table. Their seedling Dianthus, a semi-double, glowing crimson, floriferous novelty, was much admired.

Mr. C. W. Piper, The Nurseries, Uckfield, Sussex, contributed beautiful bunches of a new Tea-scented Rose, whose name a lady suggested should be "Peace." The Rose is somewhat like Mme. de Bravy—a very pleasing creamy colour. It is spoken of as "a continuous bloomer, early, midseason and late, resembling G. Nabonnand in habit, and is one of the best for massing."

Sir Trevor Lawrence, Bart., Burford, Dorking, sent *Onosma pyramidalis*, a grey, hirsute, upright growing species with drooping crimson flowers.

*Philodendron Corsinianum*, a handsome Aroid, from Messrs. Bull and Sons, Chelsea, received considerable attention. *Lindenbergia grandiflora*, with oval-acuminate, crenate leaves,  $4\frac{1}{2}$  in long, somewhat hispid, and axillary yellow flowers, was shown by Messrs. J. Veitch and Sons, Limited, Chelsea. It is showy, seen at its best, and good for autumn.

Only a very few Orchids, from various patrons, were brought forward. The other novelties are described below. A lecture on "Hardy Fruits in Yorkshire," by Mr. A. Gaut, was delivered in the canteen.

#### Certificates and Awards of Merit.

*Cattleya Schofieldiana*, *Hessle variety* (W. P. Burkinshaw, Esq.).—A handsome *Cattleya*, with large segments, greenish yellow, and brown spotted. (Award of Merit.) From The West Hill, Hessle, near Hull (gardener, Mr. Barker).

*Ceanothus Indigo* (Mrs. W. H. Burns).—Robust in growth, foliage dark and glossy, flowers in dense thyrsoid cymes, and of a bright indigo hue. From North Mymms Park, Hatfield (gardener, Mr. C. R. Fielder).

*Nymphaea stellata*, var. *Mrs. Ward* (Leopold de Rothschild, Esq.).—A great break in colour, a decided rose-magenta, the flowers the same size as *N. stellata*. (Award of Merit.) From Gunnersbury House, Acton (gardener, Mr. J. Hudson, V.M.H.).

*Rose Peace* (Mr. W. Piper).—A Tea-scented Rose, full in form, of a light creamy colour, with long reddish stems of dark foliage. It has the habit of *G. Nabonnand*. (Award of Merit.) From Uckfield, Sussex.

*Sterculia Russelliana* (Mr. J. Russell, Richmond).—A graceful foliage plant, reminding one of *Aralia Veitchii*. (Award of Merit.)

*Sweet Pea Dorothy Eckford* (Hobbies, Ltd.).—A pure white variety already described. (Award of Merit.)

*Thuia Ellwangeriana pygmaea aurea* (Charles Turner).—A round fluffy mass of growth. It is feathery, like *Retinospora plumosa*, though resembling a Juniper towards the base. A good dwarf shrub for winter bedding. (Award of Merit.) From Slough.

### National Dahlia, Sept. 2nd and 3rd.

Until Mr. Edward Mawley's Dahlia Analysis appears in the *Journal of Horticulture* next spring, growers will be unable definitely to tell how the various forms of the flower were exhibited as regards numbers, compared with other years, when the show was held at the Crystal Palace. As all who follow events are aware, the directorate of the Palace at Sydenham found it inconvenient to fulfil certain promises made, and the alternative is wrought out in the dissolution of the exhibitions of the National Dahlia Society from their hitherto pleasant quarters at the place named. The Drill Hall affords a poor substitute, which most will admit, because there is too little space, and the handsome displays set up by the nurserymen are so confined as to lose much of that imposing effect which they seemed formerly to have.

Again, the season has been remarkable in many respects, and though there may be no lack of leafage and stout, sappy stems, we are afraid the floral yield has suffered considerably from lack of dry, sunny weather. Colour all through the exhibition was deficient, and size was below par. Refinement, too, especially among Shows and Fancies, was a quality largely wanting. Looking from the balcony of the hall the scene was bright, very bright,

but our impressions of this show were not favourable, judged against past years. Single Dahlias were generally well shown, and the leading collections of Pompons, as of Cactus varieties, were very good.

#### Nurserymen.

##### SHOW AND FANCY DAHLIAS, INTERMIXED.

DIVISION A.—There were four entries in the class for forty-eight blooms of Show and Fancy varieties, distinct. Mr. J. Walker, High Street, Thame, proved the victor, having a good even exhibit, though it must be said they were not up to their usual form. The varieties were (reading from left to right): R. T. Rawlings, T. W. Girdlestone (self), Majestic, James Cocker, Rev. J. B. M. Camm, Rebecca (self), John Hickling, Purple Prince, Maud Fellowes, Grand Sultan (self), William Powell,



*Sternbergia lutea*. (See page 218.)

William Keith, Mrs. Morgan, Imperial, John Walker, and Daniel Cornish; second row: Arthur Rawlings, Marjorie, Chieftain, T. J. Saltmarsh, Sailor Prince, Mrs. Fisher, John Standish, Watchman, Victor, J. T. West, W. Rawlings, Florence Tranter, Duke of Fife, Flag of Truce, Plutarch (self), and Golden Gem; front row: Kathleen, S. Mortimer, Plutarch, Mr. Glasscock, Mrs. W. Slack, Dr. Keynes, Queen of the Belgians, John Bennett, Buffalo Bill, Mabel Stanton, J. C. Reid, Nubian, Mrs. Langtry, Duchess of York, Muriel Hobbs, and Mr. George Harris. Mr. S. Mortimer, Swiss Nursery, Farnham, was a good second, his best blooms being T. W. Girdlestone (self), Emin Pasha, Miss Cannell, Mrs. Foster, Duchess of Albany, Mrs. Saunders, John Hickling, Mrs. Morgan, Victor, Mrs. Stephen Walker, and Buttercup. Mr. W. Treseder, The Nurseries, Cardiff, brought up the rear with good blooms of Colonist, Chieftain, Rev. J. Gooday, Maud Fellowes, and William Powell.

For thirty-six blooms distinct there were again four competitors, Mr. J. Walker leading with well-developed blooms, though they were not so even as one expects to see at the national Show. The varieties were: R. T. Rawlings, James Cocker, Majestic, Daniel Cornish, John Hickling, T. W. Girdlestone (self), Seedling, Harry Keith, Mrs. C. Noyes, Champion Rollo, Mrs.



Morgan, Imperial, Arthur Rawlings, Queen of the Belgians, Duke of Fife, Mrs. Fisher, Chieftain, Mabel, Sailor Prince, Golden Gem, William Rawlings, Marjorie, Prince Henry, John Walker, T. J. Saltmarsh, Emin Pasha, Mrs. Emery, Lord Chelmsford, J. T. West, Joseph Ashby, Chorister, Duchess of York, Kathleen, Eclipse, Mrs. Gladstone, and Diadem. Mr. S. Mortimer was second with typical blooms of William Powell, Mrs. W. Slack, Mrs. Sanders, Perfection, Sunset, Nubian, George Rawlings, Duchess of Albany, John Hickling, and Warrior; Mr. W. Treseder taking third place with good flowers of Marjorie, T. S. Ware, Mrs. W. Slack, Mrs. Saunders, Agnes, and Prince of Denmark.

**DIVISION B.**—There were only two entries in the class for twenty-four blooms distinct, and the first prize was awarded to Messrs. J. Cray and Sons, The Nurseries, Frome, with a good exhibit, the varieties being Rev. J. B. M. Camm, Florence Tranter, William Rawlings, W. Powell, Mrs. Gladstone, Willie Garrett, Shottesham Hero, Chieftain, Matthew Campbell, Mrs. Saunders, Dr. Keynes, Mabel Stanton, Harry Keith, Mrs. W. Slack, Emin Pasha, John Hickling, T. J. Saltmarsh, D. Johnston, T. J. West, T. S. Ware, Excellent, John Walker, Mrs. J. Downie, and Mrs. Every. Mr. M. V. Seale, Vine Nurseries, Sevenoaks, was second, his best blooms being John Forbes, Mrs. Gladstone, Mr. Glasscock, John Walker, Crimson King, S. Mortimer, and Mrs. W. Slack.

The class for eighteen Show and Fancy varieties was only represented by two exhibitors, Messrs. J. Cray and Sons being placed first for a moderate exhibit. The varieties employed were T. S. Ware, Rev. J. B. M. Camm, W. Rawlings, Mrs. W. Slack, Emin Pasha, R. T. Rawlings, John Walker, Colonist, Mrs. Gladstone, J. T. West, William Powell, Mrs. J. Downie, Diadem, Mrs. Langtry, Matthew Campbell, Florence Tranter, W. Garrett, and Shottesham Hero. Mr. M. V. Seale again occupied the second place. His best flowers were Plutarch, J. B. Service, Mrs. W. Slack, Miss Cammell, Colonist, R. T. Rawlings, and John Rawlings.

**DIVISION C.**—Twelve blooms, distinct, were represented by one board, surely a poor display for the National Society, but Mr. J. R. Tranter, Henley-on-Thames, deserved the first prize which was awarded. His varieties were John Standish, John Hickling, T. W. Girdlestone (self), Champion Rollo, William Powell, Duchess of York, Florence Tranter, J. T. West, Dr. Keynes, Matthew Campbell, Earl of Ravenswood, and J. R. Tranter.

#### CACTUS DAHLIAS.

In the premier class for eighteen bunches of Cactus varieties distinct, six blooms in each bunch, there were four competitors. Messrs. J. Stredwick and Son, Silverhill Park, St. Leonards-on-Sea, was awarded first prize for a good strong stand, which was somewhat lacking in bright and dark colours. The varieties were F. H. Chapman, Tasmania, Eva, Vesuvius, Mary Farnsworth, Etna, H. J. Jones, Uncle Tom, Raymond Parkes, Mrs. Balding, Clara, H. T. Robertson, Mrs. Mawley, Bruce, J. W. Wilkinson, Clara G. Stredwick, Miss F. M. Stredwick, and Vesta. Messrs. Keynes, Williams and Co., Salisbury, were second with good bunches of P. W. Tullock, Coronation, Mrs. J. W. Jackson, Gabriel, Mr. Carter Page, Spotless Queen, and Mr. J. J. Crowe. Messrs. J. Burrell and Co., Cambridge, were third, staging Phineas, Hubert, Ianthe, Ida, and Albion in good form.

There were five contestants in the class for twelve bunches, distinct, of six blooms each, Mr. J. Walker being awarded the first prize with a refined stand. His varieties were W. P. Tullock, Mrs. E. Mawley, Viscountess Sherbrook, Lottie Dean, J. Weir Fyfe, Lord Roberts, Aunt Chloe, Mr. Carter Page, Lord Alfriston, Mr. J. J. Crowe, Galliard, and J. F. Hudson. Mr. C. Turner, Slough, made a good second. His best bunches were J. W. Wilkinson, Floradora, Lyric, Galliard, Lord Roberts, and Lyric; Mr. S. Mortimer bringing up the rear.

Class 8 was for forty-eight blooms, distinct, arranged on the orthodox boards. Again there were only three competitors, Messrs. J. Stredwick and Son being placed first for an exhibit rich in novelties. The varieties were H. J. Jones, Raymond Parks, Mabel, Mrs. Winstanley, Uncle Tom, Hercules, Red Rover, Mayor Tuppeney, Comet, Tasmania, Etna, Bruce, Green's White, P. J. Jackson, Eva, Sportsman, Rosine, Clara, Mabel Tullock, Elegant, Miss F. M. Stredwick, Marjory, Gabriel, Galliard, Ella Smith, Robin Hood, Mrs. Balding, Erin, J. W. Wilkinson, H. F. Robertson, Viscountess Sherbrooke, W. F. Balding, Ellen, Friar Tuck, Ringdove, Boadicea, Miss Brooker, Chas. Druery, Eric, Antler, Attraction, Nero, Princess, William Peters, Ajax, Aunt Chloe, and Lyric. Messrs. J. Burrell and Co. were a good second with fine blooms of Phineas, Decima, Dulcis, J. W. Wilkinson, Olive, Ibis, Colorado, Hector, Oliver Twist, Enchantress, Alicia, Albion, Ajax, and Lyric. Messrs. Keynes, Williams and Co. were third, having pretty blooms of Alpha, Ajax, Mrs. Carter Page, Cornucopia, The King, and Arab.

The class for twenty-four blooms, distinct, appeared more popular, for there were seven competitors who staged. Mr. W. Treseder came out first with a splendid exhibit. The varieties were Artus, Floradora, Lottie Dean, Britannia, Bernice, Alpha, Rosine, Clara G. Stredwick, Debonnair, Mrs. J. J. Crowe, Galliard, Vesta, Ajax, Mrs. A. F. Perkins, Lord Roberts,

Loyalty, Mrs. J. P. Clarke, Mrs. De Lucca, Prince of Yellows, Mrs. Carter Page, Uncle Tom, J. H. Jackson, Up-to-Date, and Mrs. Ed. Mawley. Mr. W. Baxter, Woking, was second, having nice even blooms of Mrs. McIntosh, Cornucopia, Floradora, Ethel, Mrs. J. J. Crowe, Mrs. H. A. Needs, and Monarch; and Mr. M. V. Seale third.

The decorative class for twelve varieties of six blooms, each arranged in vases with any suitable foliage, grasses or berries, proved an undoubted success, and formed a pleasing change, though there were only three exhibitors. The first prize being awarded to Mr. M. V. Seale, whose exhibit was tastefully arranged with a wide variety of foliage and berries. The varieties were Uncle Tom, Lord Roberts, Prince of Yellows, Galliard, Vesta, Starfish, Jealousy, Floradora, Britannia, Viscountess Sherbrooke, Mrs. J. J. Crowe, and J. H. Jackson. Messrs. Keynes, Williams and Co., Salisbury, were second with excellent flowers, though much weaker in foliage adornments, their chief varieties were Artus, Alpha, Cornucopia, Lord Roberts, and Mrs. J. J. Crowe; while Messrs. J. Cheal and Sons, Crawley, were third.

#### POMPON DAHLIAS.

The large class for Pompons, to be exhibited in twenty-four varieties, in bunches of ten blooms each, was poorly represented, only two exhibitors staging; the quality was, however, good in both classes. The first prize was awarded to Mr. C. Turner for blooms of the correct size. His varieties were Fosco, Thalia, Sunny Daybreak, Bacchus, Lilian, Mars, Vara, Adelaide, Daisy, Orpheus, Mephisto, Jessica, Minnie, Cyril, Phoebe, Douglas, Elsa, Darkest of All, Nerissa, Snowflake, Galatea, Buttercup, Little Bugler, and Emily Hopper. Mr. M. V. Seale, following with good examples of Adelaide, Doris, The Duke, Ernest Harper, and Edith Bryant.

Class 12 for twelve bunches of ten blooms, distinct, brought out a fair field of four entries, Messrs. J. Burrell and Co. being placed first with a sweetly pretty stand. The varieties were Nellie Broomhead, Bacchus, Violet, Emily Hopper, Distinction, Nerissa, Daisy Donovan, Mary Kirk, Ganymede, Little Bugler, and Jessica. Messrs. J. Cray and Sons, Frome, were second with an even display, some of the best bunches were Douglas, E. Harper, Sunny Daybreak, Nerissa, and Bacchus. Mr. J. Walker was third.

#### SINGLE DAHLIAS.

As usual, the entries in the single Dahlia classes were very poor; in the premier class for twenty-four bunches, there were only two entries. Messrs. J. Cheal and Sons, Crawley, being placed first, with a fine display, the colours being bright, and the whole exhibit fresh. The varieties were Tommy Duchess of Marlborough, Veronica, Columbine, Sunningdale White, Donna Casilda, May Sharpe, Miss Girdlestone, Aurora, Princess Beatrice, W. Parrott, Beauty's Eye, Naomi Tighe, Girlie, Formosa, Alice Seale, Meta, Nellie Nicholson, Hilda, Cicely, Miss Morland, Leslie Seale, Polly Eccles, and Victoria. Mr. M. V. Seale was a good second.

For twelve bunches there were again two competitors, Mr. J. Walker being first with blooms which were certainly on the large size of the correct type; the varieties were Formosa, The Bride, Elsie, Fascination, Beauty's Eye, Aurora, Duke of York, Naomi Tighe, Columbine, Robin Adair, Miss Roberts, and Leslie Seale. Messrs. J. Cray and Sons were second with good typical flowers of the correct size.

#### Amateurs.

##### SHOW OR FANCY DAHLIAS, INTERMIXED.

**TWENTY-FOUR BLOOMS, DISTINCT.**—Three sets were brought forward, but the quality was inferior compared with what one generally sees at this show. Mr. T. Hobbs, The Cedars, Downend, Bristol, led against Mr. T. Anstiss, Brill, Bucks, who was accorded the second prize. The blooms were generally under size, and lacked that lustre which a sunny or dry season produces. The choice blooms represented the varieties Mrs. Langtry, Richard Dean, a beautifully built bloom of dark magenta colour; R. T. Rawlings, the handsome yellow favourite, and the rich chestnut Dr. Keynes.

For the eighteen distinct varieties here, the premier award fell to Mr. S. Cooper, of Hamlet, Chippenham, with rather unevenly built blooms, amongst which the best were Victor, Arthur Rawlings, Sunset, and Mrs. Gladstone. The second award was poorly upheld by Mr. A. Parkes, Ightam Motts, Ivy Hatch, Sevenoaks, his blooms being small.

##### SHOW DAHLIAS ONLY.

A good dozen blooms were staged by Mr. H. Blundell, gardener to Mrs. St. Pierre Harris, Orpington, Kent, his stand including W. Powell, one of the largest blooms staged, but somewhat marked; Perfection, which is lighter than Dr. Keynes; Mrs. Glasscock, resembling R. Dean; F. Clifford, a new dark red of merit; Mrs. Gladstone, under size; Countess and Standard, with others. This was the only entry in the class. For the half dozen Shows, the winners were Messrs. Jeffries, Chippenham; A. Parks, of Sevenoaks; and Cousins from Chippenham.

## FANCY DAHLIAS ONLY.

Certainly these were far less attractive in our eyes than they have been in better growing seasons. Competition was not keen. For a dozen sorts the leader was Mr. S. Cooper, who had, indeed, the most superior set, staging good flowers of Mrs. Saunders, Peacock, Sunset, Lottie Eckford, and Salamander. Mr. Anstiss followed. Leading for the six was Mr. T. Hobbs; and second, Mr. A. Parkes; a third being captured by Mr. E. Jefferies.

## CACTUS DAHLIAS.

Though these, in respect of their beauty, scarcely compared with previous seasons, yet they furnished the chief attraction at the meeting. In class 21, for twelve varieties in bunches of six blooms each, we found Mr. L. McKenna, of The Honeys, Twyford, Berks, leading against two others; second and third awards going respectively to Mr. W. Peters, of Holmhurst Lodge, Baldstow, St. Leonard's-on-Sea, and Mr. F. W. Fellowes, The Lane House, King's Walden, Hitchin. In Mr. McKenna's stand were good samples of the showy Innovation, also Kathleen, and Mrs. E. Mawley. Mr. Peters staged True Friend (a dark blood red) admirably; with Florence, Major Tuppeney, which were beautiful flowers, and the rather washy-coloured Up-to-Date.

Four competitors faced the judges for the nine distinct, but Mr. P. W. Tullock, the well-known amateur from New Church Road, Hove, was incomparably first. His blooms were amongst the finest in the show, being large and wonderfully bright. He stages admirably, too. In the back row were Ajax, Galliard, and Lucifer; second row: Loyalty, Mrs. E. Mawley, and Florence; in the front: Mrs. Winstanley, Alpha, and P. W. Tullock, all of them of newer blood. The second place was filled by Mr. H. L. Brousson, Sidcup Place, Kent, having nice flowers of Rosine, Galliard and Lord Roberts, creamy white.

Class 23 for six, was alone supported by Mr. S. Cooper, and five contested in the next for the eighteen blooms. Here the merits of Mr. H. A. Needs' flowers were undoubtedly superior to those of Mr. J. Bryant, and staged on a jet-black board, they showed up well. Aunt Chloe was handsome, and Mrs. H. J. Jones was large and well coloured, though ragged compared with Gabriel, J. F. Hudson, and the bright yellow Eclipse. Mr. Bryant had strong blooms of Ajax, R. Dean, and Rosine, which was very deeply coloured. Third came Mr. Fellowes of Hitchin, but his flowers were small and otherwise below par. Three entrants in class 25, for twelve, showed bright blooms, Mr. McKenna here being foremost; Mr. H. Brown, North Street, Luton, next; and the Rev. S. Spencer Pearce, of Combe Cottage, near Woodstock, third. Out of half a dozen contestants for the six blooms, Mr. F. G. Oliver, of Tollington Park, N., was leader.

## POMPON DAHLIAS.

For twelve varieties, in class 27, there were five collections of these charming little flowers. Mr. H. Brown, Luton, was placed first, and staged the following:—Sunny Daybreak, Favourite, Jernea, Nerissa, Bacchus, Dr. Jim, Clarissa, Hypatia, Emily Hoffer, Lorna Doone, and Rosebud. The second place was filled by Mr. W. C. Pagram, The Whin, Weybridge, having Nellie Broomhead, Eva, G. Brinkman, and Phœbe as his most effective bunches; third, Mr. Peters. Mr. Brown again led, with Mr. S. Cooper second for the six bunches.

## SINGLE DAHLIAS.

Here Mr. J. F. Hudson, M.A., of Acton, W., staged the best six bunches of ten flowers each, including Donna Casilda, Naomi Tighe, Columbine, Aurora, Tommy, and Leslie Seale—a very bright coloured collection. The Rev. S. Spencer Pearce made a good second, having well staged samples of Miss Moreland, Cleopatra, Bride, and Victoria. Third, Mr. C. Osman, of Sutton. Mr. E. Mawley, in the next class, had large flowers of great substance and good in colour, and was first. His Demon was very rich and dark; Rosebank Cardinal is bright crimson, and Coronation is a shade brighter still. Beauty's Eye was also grandly shown. This was the sole entry.

## DECORATIVE CLASSES.

These were pleasing on the whole, but exhibitors have something to learn in colour contrasts and harmonies before perfection is reached. Mr. Hudson's basket in class 31, which received no award, was, to our mind, exquisite, the Smilax, the Ferns, and berried Viburnums being very tasteful. The first prize went to Mr. R. Edwards, Beechy Lees, Sevenoaks, with an arrangement in yellow and buff. He also led for a vase of Dahlias, in class 32, with a pleasing salmon variety. We were much delighted with Mr. Mawley's vase containing rich crimson Cactus flowers and sprays of the purple Prunus Pissardi—a splendid vase for a room of mahogany furniture. It, too, received no award, and, therefore, we are unorthodox in noticing it!

Mr. Needs was placed in the forefront for three vases in class 33, and here he contrasted a creamy variety with purple foliage, and yellow foliage with purple flowers.

## Open Classes.

Seven shower bouquets furnished a somewhat imposing display, and proved how adaptable the Cactus Dahlias are for use in this way. Mr. W. Treseder, Cardiff, was first with a heavy yellow bouquet; Mr. F. W. Fellowes, Hitchin, with an up-to-date presentment of crimson, neatly finished off with long ribbons at the back.

## FANCY SINGLE DAHLIAS.

With Duchess of Marlborough, Columbia, Urban Youens, Alice Scale, Victoria, and Adonis, Mr. M. V. Scale, of Sevenoaks, beat Mr. J. F. Hudson, whose set of six bunches were very pleasing. The third fell to Rev. S. Spencer Pearce.

## SEEDLINGS.

The following varieties received certificates:—

*Dahlia Elsa* (Mr. C. Turner).—A Pompon of merit, white, good in petal, and of excellent form. (First-class Certificate.)

*Dahlia Euna* (Messrs. J. Stredwick & Son).—A Cactus variety of average size and true petals; colour rosy lilac with yellow at the base of the petals. A very distinct form. (First-class Certificate.)

*Dahlia Eva* (Messrs. J. Stredwick & Son).—A Cactus variety, pure white, slightly green at the base of petals; petals long and slightly incurving. A good form. (First-class Certificate.)

*Dahlia F. A. Wellesley* (H. Shoesmith).—A Cactus variety already described in these pages. One of the best. (First-class Certificate.)

*Dahlia Henry Clark* (Messrs. Keynes, Williams & Co.).—A Show variety of considerable merit; cream ground, edged purple, with occasional splashes of yellow in the florets. (First-class Certificate.)

*Dahlia H. J. Jones* (Messrs. J. Stredwick & Son).—A true Cactus variety, the florets being long and slightly incurving; the outer petals are pink, shading to pale yellow in the centre of the flower. A good exhibition form. (First-class Certificate.)

*Dahlia Ianthe* (J. Burrell & Co.).—A Cactus variety, with long, narrow petals, yellow ground overlaid with rosy purple; will make a good exhibition variety. (First-class Certificate.)

*Dahlia Mabel Needs* (S. Mortimer).—A large Cactus variety with true florets, red, slightly shaded purple; stem appears weakly. (First-class Certificate.)

*Dahlia Snowdrop* (Messrs. J. Cheal & Sons).—A single white, with a yellow disc; a good form. (First-class Certificate.)

*Dahlia Vesuvius* (Messrs. J. Stredwick & Son).—A distinct break in the Cactus section; the florets are long and straight, while the colour is best described as yellow striped red. (First-class Certificate.)

*Dahlia William F. Balding* (Messrs. J. Stredwick & Son).—A Cactus variety, deep amber florets, shading off to yellow in the centre; petals claw like. (First-class Certificate.)

*Dahlia Winsome* (Messrs. Hobbies, Ltd.).—A capital white Cactus variety. The petals are narrow and incurving; should make an acquisition. (First-class Certificate.)

## Non-competitive Exhibits.

Messrs. H. Cannell and Sons, Swanley, occupied a table running the entire length of the hall with an exhibit of Dahlias, chiefly of the Cactus section, all being arranged with ornamental foliage, grasses, and Gypsophila. The most noteworthy varieties were Exquisite, Standard Bearer, Mrs. Winstanley, Mrs. J. P. Clarke, Cornucopia, John Burn, Sandpiper, Mrs. A. F. Perkins, Mrs. Horace Wright, J. H. Jackson, R. J. Hamill, J. W. Wilkinson, J. Weir Fife, Gabriel, Alpha, and Imperator.

Messrs. Hobbies, Ltd., Dereham, made an exquisite display of Cactus Dahlias, arranged gracefully in a variety of green foliage. The exhibit was noteworthy as not being too crowded, every bloom being well displayed. The newer varieties of Cactus were well represented. The following varieties were most striking: Mr. Amos Perry, Honeysuckle, Columbia, Florene, Sailor Prince, Mrs. J. P. Clarke, Aunt Chloe, Lottie Dean, Artus, Gabriel, Alpha, Vesta, Mrs. Winstanley, Loogaler (what a name), and Fred Cobbold.

From Messrs. W. Cutbush and Son, Highgate, came a good collection, arranged in bamboo stands, the front of the exhibit being filled with the usual show boxes. The most prominent were Innovation, Countess of Lonsdale, Imperator, Cornucopia, Britannia, and Mrs. J. J. Crowe.

Messrs. Barr and Sons, Covent Garden, also contributed a display of Cactus, single, and Pompon varieties, all the modern varieties being represented.

Messrs. Jones and Sons, Shrewsbury, staged a collection of the various types, the Cactus varieties being especially prominent. The Show and Fancy varieties were also good.

## Bath, August 27th and 28th.

Favoured with unusually fine weather, the Floral Fête Committee were in high spirits on the opening day of their autumn show, and were justified by the large attendance of visitors. The show itself was of all round excellence, plants, cut flowers, fruit and vegetables, all being alike of good quality.

With eighteen plants, twelve foliage and six flowering.



Messrs. J. Cypher and Sons were, as usual, an easy first, their Palms, Crotons, Statice, Heaths, &c., being excellent. W. J. Mann, Esq., Trowbridge (H. Mathews, gardener), second; and J. B. Wood and Son third. Messrs. Cypher and Mathews won with six flowering specimens; and Messrs. E. S. Cole and Son, and G. Hallett, with foliage plants. Messrs. Cypher's group arranged on a space of 200ft was disposed in their well known style, Orchids in variety, the Butterfly *Oncidium* in particular being a prominent feature, and single-stemmed Crotons in good variety, were grouped and dotted in a pleasing manner. R. B. Cater, Esq., Bath, was a very creditable second, and E. S. Cole and Son third; artistic taste and good quality of plant being alike present. In the single specimens, and with a collection of Orchids, Messrs. Cypher also won, a grand *Croton Andreanus* in a 10in pot winning the prize for a specimen foliage plant. Mr. George Tucker's nine Fuchsias were finely grown and flowered, but some other exhibits were not up to the standard of former Bath shows. The last-named exhibitor was also successful with Zonal Pelargoniums, Ferns and Begonias.

Roses in twenty-four varieties staged by Messrs. Perkins, Coventry, were beautifully fresh, bright and heavy. Mr. J. Mattock, Oxford, and Messrs. Cooling, Bath, following. Mr. J. Mattock scored with twelve Teas and twelve varieties shown in vases; Messrs. W. T. Mattock, and Perkins and Sons being also successful. Beautiful Gladioli, thirty-six spikes and twelve spikes, were staged by the Messrs. J. and W. J. Mattock, Mr. G. Humphries and Mr. F. Hooper also taking prizes. Dahlias were not so good or so numerous as is customary, Messrs. J. Cray and Sons, Frome; W. Treseder, Cardiff; T. Hoskins; T. Carr, Esq., and G. Humphries being representative names among winners. Herbaceous flowers were really marvellous, both in wealth and variety, Bath growers excelling.

Floral table decorations proved a most attractive class, both alike among the public and competitors, and perhaps greater criticism is evoked from this phase of floral competition than any other connected with flower shows. Needless to say, there were several disappointed ones on this occasion, and the judgment of the censors gave rise to eloquence in their praise or otherwise from many voices. It is worthy of remark, that none of the Bath ladies figured among the prizewinners. Messrs. Cypher won with an epergne, and with buttonhole bouquets; and with an arrangement of one kind of flower in a vase, Mr. Mattock was the victor in a hard fight, his vase of Sunset Roses being very chaste.

Fruit at Bath is always an attractive portion of the show, and though in extent there was a lesser competition than usual, high quality was none the less a predominant element. Mr. Mitchell, gardener to J. V. Fleming, Esq., Romsey, was a good first for eight bunches of Grapes in four varieties, his Madresfield Court, White Muscats, Black Hamburgs, and Gros Marocs being very superior in colour, weight and finish. Mr. W. Marsh, Bath, was a very good second. A collection of eight dishes brought out a spirited entry of seven. In this, Mr. Mitchell won by the excellence of his Grapes, Madresfield and Alexandrian Muscats being extra good, as also were Sea Eagle Peaches and Pineapple Nectarines. Mr. Strugnell, gardener to Colonel Vivian, Rood Ashton, was second, Hamstead Park Melon, Sea Eagle Peaches, and Alicante Grapes being his better dishes. Mr. Hall, gardener to Lady Louisa Ashburton, was an excellent third; his Grapes and Melons being extra fine. The latter was first with White Muscats, good in bunch, colour and berry; and Mr. Mitchell staged wonderfully coloured Black Hamburgs in a class for that variety.

Four classes are provided for Melons, two of them by Messrs. Sutton, which brought together a quantity of variable fruit. Messrs. Wilkins, gardener to Lady T. Guest, of Henstridge; Strugnell, Somerville, and Mrs. Greaves were the most successful names. Mr. Strugnell won from Mr. Mitchell with Peaches, fine Sea Eagles in each case; and Mr. Hall was successful with Nectarines. Pears were numerous, also dessert and cooking Apples, but generally the fruits were below the average in size and colour. Filberts were good, as also were Plums, Cherries, and Tomatoes.

Honorary exhibits from Messrs. Blackmore and Langdon—Begonias and Carnations—were most attractive. Messrs. I. House and Son for hardy flowers and Sweet Peas were given certificates of merit, as also were Mr. Fowle, Teignmouth, for a group of Carnation *Devonia*. Messrs. Blackmore's Begonias were well deserving of a higher award of merit, the collection being both extensive in flower and variety, well displayed, and intensely interesting. Messrs. House's Sweet Peas, too, were fine in colour and variety.

To the secretaries, Messrs. Pearson and Jeffery, much praise is due for the business-like tact which is brought to bear upon their arduous duties. They are supported by an excellent committee and chairman (R. B. Cater, Esq.), the latter an expert in matters horticultural as in his other high official capacities. In short, there is an ideality in the officers, and not less so the show ground—the Sydney Gardens—which dispenses abundant tree shade, ample accommodation and natural seclusion.

## Bristol Gardeners'.

The usual meeting of this association was held at St. John's Rooms, on Thursday evening last, under the chairmanship of Mr. E. Binfield, The Gardens, Old Sneyd Park. The lecturer for the evening was Mr. H. Kitley, of Messrs. Garaway's Nurseries, Clifton, his subject being "Seed Testing and Saving," with which he dealt in a very able and practical way. He impressed on his audience the absolute necessity of obtaining the very purest seeds possible, which was of the utmost importance for successful gardening. The best methods for testing the germinating power of seeds Mr. Kitley fully explained, which was practised by all of our leading seedsmen, who were thus enabled to recommend their seeds with the utmost confidence. He also advised the



Conference Pear. (See page 218.)

gardener to test his seeds before sowing the general lot. Every well appointed garden, the lecturer remarked, should be fitted up with a suitable seed room, wherein to keep the surplus seeds till the time for sowing, which would keep them free from damp and insects, and thereby save many failures. Referring to seed saving, Mr. Kitley strongly advised saving only from the most perfect forms, and from those first maturing. He also gave a list of those which retain their vitality for any length of time, as also those of short duration. His paper was much appreciated by all present, and he was cordially thanked for his effort. Prizes were awarded as follows: The first, being given by Mr. Chas. Kemp, was won by Mr. A. Baker (gardener, Mr. Orchard); the second going to Mr. J. B. Brain (gardener, Mr. Atwell), for six bunches perennials. For twelve spring sown Onions of mammoth size, Mr. Young was awarded a Certificate of Merit, Mr. Garnish obtaining one for some very fine Asters, Messrs. Ambrose and Son being also awarded one for some excellent seedling Carnation blooms.

## THE BEE-KEEPER.

### Driven Bees.

Driving is merely a more humane method of taking honey from bees in skeps than the old barbarous custom of killing them by placing them over a brimstone pit. The application of the word "driving" in describing the method sounds very formidable, but the following axiom of the Rev. L. L. Langstroth's explains why they can be so easily forced to desert the stores they have gathered at such expense:—"When frightened by smoke or by drumming on their hives bees fill themselves with honey, and lose all disposition to sting unless they are hurt."

The operation is performed as follows:—On a fine warm evening, give a puff or two of smoke at the entrance of the skep, and after allowing a few minutes for the bees to load themselves with honey, invert the skep and remove it to a spot as far away from other bees as possible, and place an empty skep in its position to catch the flying bees which will return home. Now, above the inverted hive (which for ease in manipulating should be placed in a bucket at a comfortable height) place another empty skep and fasten the two together at the point furthest away, and fix them with their backs to the strongest light, the front edges being about 6in apart, in which position secure them by driving iron on each side. This liberates both hands, and the whole structure will be quite rigid. Now, with the open hand tap the sides of the bottom hive hard enough to cause the combs to vibrate, but not sufficiently hard to break them from their attachments.

The bees at first view these movements with perplexity, and finally dismay, then commences, what in bee-keeping phraseology is termed the subdued roar, and at a run the bees make for the dark interior of the empty skep. If the queen is required she may be found as she passes over the junction of the two skeps and captured. When conditions are favourable they may be driven in less than fifteen minutes. If the operation is prolonged, pouring a little warm syrup between the combs will facilitate matters. Immediately the bees are cleared from the combs they should be secured by covering the mouth of the hive with porous bagging, or cheese cloth, and if there are two or three weak lots they may be joined together after removing the surplus queens.

To prevent robbing, it is necessary when placing them in their new hive to throw them into the empty brood chamber, placing the frames in position afterwards. The quilt, feeder, and entrance may then be adjusted. It is scarcely necessary to point out that ready drawn out combs for this purpose are invaluable. Never attempt to unite driven bees to an established stock by running them in at the entrance. This will result in nothing but fighting, thousands being killed, besides which most of them die before winter.

To strengthen a weak colony the driven bees should be placed on the spare combs in another hive close to the old stock, and any time up to October, when they have developed a good brood nest, they may be united by first smoking both stocks and then alternating the bars of bees with those in the weak colony after deposing the oldest queen. Much more is achieved by this plan of uniting. The amount of brood in the driven stock will represent the additional strength given to the weak lot.—E. E., Sandbach.

### "Russia," a New Magazine.

The title conveys the scope of this magazine's work, and its brevity leaves room for the imagination's play. Four numbers have reached us, the first appearing on July 19, the others in each week since. "Russia" is an illustrated journal (12½in by 9½in), devoted to policy, industry, commerce, literature, and art in their relation to Russia. The articles are useful and interesting in their several departments, and are admirably illustrated. Russian notabilities, soldiers, poets, authors, clergymen, peasants, and views of architectural, sculptural, and rural features in Russia and its towns, are portrayed in its pages. Politics, literature, and industry receive considerable attention in these four numbers before us, and if the publishers can continue to send out weekly issues of it, the educative influence it exerts should, at all events, be greatly beneficial to the great country it represents. The journal is beautifully printed on stout art paper; the cover is suggestive of snowy regions.



### Hardy Fruit Garden.

**PREPARATIONS FOR GATHERING FRUIT.**—The varieties of Apples and Pears are numerous, and the periods when the fruits are matured sufficiently extend over several weeks, according as to whether the varieties are early, midseason or late. The importance of careful gathering at the right time is only equalled by the care and attention devoted to storing under conditions which shall gradually bring the fruits to a perfect state of ripeness. At this period attention may well be called to a number of small but important items.

**THE FRUIT ROOM.**—Where there is much fruit, the varieties being numerous, and the quality of the fruit generally good, the provision of a good room for the purpose of storing is a prime essential. A room 40ft to 50ft long, and 14ft wide, will provide plenty of space for a considerable quantity of fruit. Arrange tiers of shelves down each side, or adopt a more modern system of storing the fruit in trays specially made for the purpose. These receptacles can be stored one upon another in a limited space, and, being portable, are easily examined from time to time. Whether permanent shelving or trays are used, however, the general cleanliness of the fruit-room must be seen to. Every portion of the walls should be limewashed after thoroughly cleansing the woodwork. Make a careful search for holes or crevices in the walls or flooring, as rats and mice scenting the fruit will make every effort to reach it, and the damage they can do in a short time is deplorable. Every proper fruit room has the means of heating, this being necessary in frosty and occasionally in damp weather. Should there be any defects in the working of the apparatus this is the time to remedy them. Finally remove all offensive matter from the floor, so as to secure perfect sweetness. Leave the structure open until thoroughly dry.

**CONVENIENCES FOR GATHERING FRUIT.**—Fruit that is out of reach by persons standing on the ground must be gathered either from steps, ladders, or from the limbs of the trees. Steps of a good height are very convenient for the outermost branches, which can be reached from them. They should be made firm and safe before using them, alike for the safety of the gatherer, and to prevent injury to fruit. Ladders must be light and convenient, and in good repair, danger arising at critical moments from defective rungs. Iron hooks which can be suspended from the rungs of the ladder or convenient boughs of the trees are almost indispensable for hanging baskets upon. The baskets may be of various sizes. Those used for the actual gathering or placing in the fruit direct from the trees must not be too large, and ought to have something soft in the bottom for the fruit to lie upon to avoid bruising. The gardener's apron is an excellent receptacle for holding fruit as it is gathered from the trees. The lower edge may be drawn together and held by one hand, thus forming a pouch, while, of course, the upper part is secured round the waist of the wearer. In emptying the gathering basket the fruits should be handed out separately, and carefully placed in larger baskets for conveyance to the fruit room. If, however, the permanent storing trays are used, all that is necessary is to place the fruit in them at once, and move to the fruit room without further disturbance.

**WHEN TO GATHER FRUIT.**—The gathering of fruit all at one time from the trees is not to be recommended, except in such cases as Plums or Damsons, but usually these have had a preliminary overhauling in securing the first ripened fruits. The best test for knowing when Apples and Pears are ready for gathering is to raise the fruits to a horizontal position, when, if ready, they will readily detach themselves. Of course, the appearance of the fruit is some guide, and should be followed before handling the fruit too freely. Plums come freely from the spurs just before they are ripe, and this is the best time to gather them, placing in a cool fruit room for a few days. None but sound fruit should be thus kept. Fruit of all kinds must be gathered only when dry. Soft fruit will much deteriorate if gathered damp, and do so in a very short time. Apples will suffer the least, but it is better to wait for dry conditions.

**PLANTING STRAWBERRIES.**—Abundance of well-rooted plants ought now to be available where the runners have been allowed to remain, and the precaution has been taken of affording the needful thinning-out of the crowded growth, together with the uprooting of weeds from among them. In many cases special preparation of the ground will have been given in order to facilitate the rooting of the runners, hence only the most desirable plantlets have been selected for rooting, and the rest dispensed with. It is possible to lift now all suitable plants with abundance of roots and soil attached, and to plant them without their suffering from the removal. In introducing fresh plants or varie-



ties from other sources roots may be numerous, but there will be little soil adhering to them; therefore give a little extra attention in planting these. Spread out the roots on small mounds of soil, covering with fine material, and pressing firmly. A good watering in the first instance is generally necessary in order to settle the soil about the roots, giving further supplies as required until the plants are well established. Cut off all runners immediately they appear, which they probably will do on strong plants lifted and inserted forthwith from the garden.

### Fruit Forcing.

**VINES.—EARLY FORCED VINES IN POTS.**—For affording a supply of new ripe Grapes in late March, or early in and through April, these are in some respects better than planted out Vines, which, unless in inside borders and light, airy, well heated structures, are not always satisfactory. Besides, the strain upon very early forced Vines is so considerable that planted out ones soon give indications of enfeeblement when started several years consecutively, so that it is found better in practice to secure stout well matured canes in pots, and after cropping them throw the Vines away, new ones being provided annually to take their place. Those for starting in November will now have the wood brown and hard, the buds perfected, and the foliage sufficiently matured if not off, for the removal of the laterals and shortening the canes to from 6ft to 8ft, according to the vigour, trellis to be occupied and the position of the plump buds. Whilst the cuts are dry it is advisable to dress them with styptic, patent knotting, or best French polish to prevent bleeding. Keep the Vines rather dry at the roots, and in a cool airy house. Where the Vines have to be bought they are best seen about now, orders being placed so as to secure stout, well-ripened canes of the most suitable varieties, which we find are Black Hamburgs and Foster's Seedling.

**EARLIEST FORCED HOUSE.**—Where care has been taken to preserve the principal foliage by cleanly culture, and a judicious encouragement of the laterals after the fruit was cut to prevent premature ripening of the principal leaves, the early forced Vines will now be in a condition to have the laterals reduced, also the bearing shoots, which will tend to induce rest and admit of early final pruning. This may be performed on early forced Vines before the leaves are all down, as the wood being brown and hard, the leaves, or some of them, turning yellow, they will not bleed nor start the buds provided the house is kept dry, fully ventilated, and cold. The pruning will cause the Vines to go more quickly and thoroughly to rest, but it will have the opposite effect on unripe ones and where the atmospheric conditions favour growth. If the Vines are in good condition they will afford bunches quite large enough if pruned to a couple of buds from the base, but when they are weak from overcropping or a long course of forcing, the spur shoots may be left a little longer to secure larger bunches. When this method is adopted shoots should be taken from as near the base as possible as well as the bearing, and not be allowed to carry fruit, but be stopped at the sixth good leaf, the laterals to one and subsequently as produced. Such shoots are sure to form good buds, as the extra foliage tends to invigorate the Vines and support the fruit on the other shoot, which can be cut away when the fruit is removed in favour of that retained for fruiting the following season. This alternate system of fruiting necessitates the shoots being kept wide apart for development, and exposed to light and air. If the Vines are grown on the usual extension system, it will be necessary to cut to plump buds on firm ripe wood, being guided by the space at command, for there must not be overcrowding. It is important that the house be thoroughly cleansed. Any weakly Vines, or those in an unsatisfactory state, may be improved by removing the soil down to the roots and from amongst them, substituting fresh loam, with an admixture of one-sixth of old mortar rubbish, a tenth of "nuts" charcoal, a twentieth of wood ashes, and a fortieth of crushed half-inch bones, with a sprinkling of some approved fertiliser. Lift any roots available for the purpose, laying them out upon the fresh compost, and cover 3 or 4 inches deep. This is best done before the fall of the leaf. It is a mistake to allow Vines when at rest to become dust-dry at the root. Comparative dryness is desirable, yet great injury is done by allowing the border to become dried to the extent of cracking and severing the fibres. The outside border should have a covering of some kind to protect the roots from the heavy autumn rains, which reduce the temperature considerably. Glass lights are preferable, as they throw off heavy rains, whilst allowing the sun to penetrate the soil. Some persons, however, are obliged to do without such aids, being content to apply a covering of leaves and litter after cold weather sets in to prevent the soil freezing, which is an absolute necessity in early forcing.

**SUCCESSION HOUSES.**—Midseason Vines have the fruit ripe or ripening, and will need a free circulation of air, especially in the early part of fine days, as the night dews are heavy, and the condensation of moisture on the berries takes place rapidly indoors if the atmosphere rises considerably before air is admitted. A little air constantly is a good thing, but it must

be increased early on fine mornings and a free circulation allowed whenever the weather is favourable. Moderate air moisture is essential for the benefit of the foliage and the sound keeping of the berries, but a close stagnant atmosphere soon causes the Grapes to spot and decay. The laterals should be kept from interfering with the access of light and air to the principal leaves, otherwise a good spread of healthy foliage over black Grapes is one of the best safeguards against their losing colour. White Grapes also do not become brown so soon when not exposed to the direct rays of the sun as they do when the foliage is thin. Where the Grapes have been cut the laterals may be reduced, also the long bearing shoots cut back to two or three leaves above the pruning buds! This will facilitate cleansing the foliage of red spider and other pests, and assist in plumping the basal buds as well as the ripening of the wood by the increased amount of light.

**LATE GRAPES.**—Where the Vines were started in good time the Grapes are well advanced in ripening. Keep the laterals well thinned, and thereby admit as much air as possible to ensure the finishing of the crop, not by large reductions at a time, but by frequent pinchings. Maintain an artificial temperature of 70deg to 75deg, falling 5deg to 10deg during the night, increasing to 80deg, 85deg, or 90deg during the day, accompanied with a circulation of air constantly, and free under favourable atmospheric conditions. Where the Grapes are only beginning to colour, somewhat sharp firing will be necessary to finish them properly before the days are too short and cold to admit of free ventilation, it being possible to do more in the next four or six weeks' time than in twice the time later on. With the Grapes well advanced in colouring and ripening, the atmospheric moisture should be reduced; those only colouring should have a moderate amount of atmospheric moisture to assist their swelling, not neglecting to supply water to the roots, and if need be top-dressings of fertiliser of a substantial and not forcing nature as required.

**YOUNG VINES.**—Those that have made a strong growth and are late in ripening should be assisted with fire heat, continuing it until the wood is ripe, accompanied with free top and bottom ventilation. Discourage any further growth by the removal of the laterals as they appear, and withhold water from the roots, only the soil must not be allowed to become too dry, and if the roots have the run of outside borders, some spare lights placed over the border, so as to throw off the wet, will be very beneficial. If the autumn be dry the border is better exposed, but heavy rains are better thrown off when the wood does not ripen kindly.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.            | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|                  |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                  |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.<br>August. |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ...24     | S.W.               | deg. 62.4               | deg. 59.0 | deg. 70.0 | deg. 59.0 | Ins. 0.03   | deg. 63.0                             | deg. 61.0      | deg. 58.1      | deg. 56.9                    |
| Monday ...25     | W.S.W.             | 62.1                    | 57.0      | 64.2      | 50.0      | —           | 62.8                                  | 61.2           | 58.4           | 42.3                         |
| Tuesday ...26    | N.E.               | 62.7                    | 55.7      | 70.2      | 47.7      | —           | 62.2                                  | 61.2           | 58.4           | 40.3                         |
| Wed'sday 27      | E.S.E.             | 56.6                    | 55.8      | 71.0      | 49.3      | 0.02        | 61.2                                  | 61.0           | 58.3           | 41.0                         |
| Thursday 28      | E.S.E.             | 62.9                    | 58.9      | 76.2      | 48.2      | —           | 61.0                                  | 60.8           | 58.4           | 39.5                         |
| Friday ...29     | E.S.E.             | 69.7                    | 61.7      | 78.3      | 53.3      | —           | 61.2                                  | 60.6           | 58.4           | 45.6                         |
| Saturday 30      | N.E.               | 60.1                    | 56.5      | 63.7      | 56.8      | 0.03        | 62.0                                  | 60.8           | 58.3           | 47.2                         |
| MEANS ...        |                    | 62.4                    | 57.8      | 70.5      | 52.0      | Total. 0.08 | 61.9                                  | 60.9           | 58.3           | 44.7                         |

Very little rain has fallen during the week, while the weather has become brighter and warmer.

### Trade Catalogues Received.

Barr and Sons, King Street, Covent Garden, London, W.C.—*1, Daffodils; 2, Bulbs for Autumn Planting.*  
 R. H. Bath, Ltd., The Floral Farms, Wisbech.—*Bulbs, Roses, &c., for Autumn Planting.*  
 Geo. Bunyard and Co., Royal Nurseries, Maidstone.—*Fruit Trees.*  
 William Logan and Co., Seedsmen, Bulb Merchants, and Florists, High Road, Chiswick.—*Bulbs.*  
 Louis Paillet, Vallee de Chatenay, Chatenay (Seine), near Paris.—*Special Trade List of Pæonies, Roses, &c.*  
 Pinchurst Nurseries, Pinchurst, N.C., U.S.A.—*American Seeds.*  
 William Sydenham, Tamworth.—*1, Roses; 2, Violas and Rock Plants.*



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

PHOTOGRAPH RECEIVED (Weston-Super-Mare).—Received with thanks.

DISEASED LEAVES OF TUBEROUS-ROOTED BEGONIAS (Surrey).—The leaves are infested with rust mite (*Tarsonymus begoni*), which is one of the most pernicious pests, as it is very injurious by its biting of the tissues and mode of life of the young in their early stages, causing the leaves to have a rusted appearance, completely checking the growth and often causing the falling of the leaves. The best preventive and repressive treatment is to spray the plants, on the under side of the leaves particularly, as well as on the upper surface, with tobacco water, 1oz of the strongest shag tobacco being placed in a vessel and a quart of boiling water poured in it, then covering over closely allow to stand until cool, then strain and apply by means of a spray diffuser, the simple article used by hairdressers, and costing about 2s. 6d., being very suitable for the purpose, repeating at intervals of a few days.

DECAY IN WOOD OF PEACH TREES (Gardener).—The pieces of wood cut from Peach trees are affected by gummosis, or gumming, a disease assigned to various causes, some authorities referring to the fungus named *Coryneum Beyerickii*, and others to *Cladosporium epiphyllum*, and others, again, to *Gloeosporium fructigenum*. In your case it appears to arise from attack of the very common *Cladosporium epiphyllum*, a minute fungus. The disease is indicated by the appearance of tearlike drops of almost colourless gum oozing from the branches, and the part above and adjacent becomes brown and dead. Diseased branches should be removed to sound wood immediately below the dead or affected part, and the ground given a dressing of air-slaked lime, applying as much as to make the soil quite white all over, even a quarter of an inch thick. In the autumn the trees should be lifted carefully and replanted, and some lime rubbish added to the soil, say a sixth, making the soil very firm under, about and over the roots. The gummosis is aggravated by the excessive vigour of the trees, and you would do well to take out a trench now one-third the distance from the stem the branches cover of trellis, and cut off all roots there, the opening being made down to the drainage. This trench may remain open a fortnight or three weeks, and then be filled in, deferring lifting until the leaves commence falling.

INSECT TO NAME (Idem).—The insect is the Potato bug (*Lygus solani*), which is found on various plants, commonly on the Potato, and does some injury, though not usually material, by sucking the juices. It is, however, rather uncommon, though sometimes appearing in great numbers in late summer, especially in the South of England, and often, associated with the Hop bug (*Lygus humuli*), is found on Chrysanthemums.

GROS COLMAN GRAPES BACKWARD IN RIPENING (Ripener).—You cannot do better than admit a little air constantly, and maintain a gentle warmth in the hot-water pipes so as to promote a circulation of the air in the house and cause the moisture to be condensed on the glass instead of on the berries, increasing the ventilation early, especially on fine mornings. We do not advise forcing treatment, as this hinders rather than forwards the colouring process, and lack of this is the greatest defect, therefore we should give the Vines plenty of time, not keeping a higher temperature at night than 65deg, and if it fall to 60deg in the morning all the better, but from the early part of the morning gradually raise the temperature of the house to 70deg, and keep between that and 75deg from fire heat through the day and until late in the afternoon or early evening, then allow to gradually cool down. A temperature of 80deg, 85deg, or 90deg may be allowed through the day from sun heat, and a free circulation of air. Beyond these temperatures we do not consider it safe, for though the Grapes may be ripened, they will be almost worthless from appearing unripe through lack of colour. The top-dressings of Peruvian guano and sulphate of ammonia will not help the Grapes in colouring, but a mixture of three parts dissolved bones, dry and crumbling, and two parts double sulphate of potash and magnesia, known in the trade as refined kainit, mixed, and 4oz of the mixture applied per square yard, scratched or very lightly pointed in, is likely to help the Vines in the current, or certainly in the future crop.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (T. B.).—The blue flower is *Trachelium caeruleum*; see separate answers to your other queries. (J. Todd.).—1. the Winter Savory, *Satureia montana*; 2. *Spiraea japonica rubra*; 3. *Spiraea japonica* var.; 4. *Helenium autumnale pumila*. (Rev. W. W.).—Probably *Lactarius volemus*, but we are unable to say precisely. (T. J. R.).—1. *Juniperus communis fastigiata*; 2. *Thuia orientalis aurea*; 3. *Cupressus macrocarpa*; 4. *Thuia gigantea*; 5. *Retinospora obtusa aurea*; 6. *Cryptomeria japonica*. (H. E. A.).—*Eccremocarpus scaber*; glad to be of service if we can. (T. J. R.—Second lot: 1. *Sequoia sempervirens*; 2. *Olearia Haasti*; 3. *Abelia rupestris*; 4. *Ercilla (Bridgesia) spicata*; 5. *Retinospora plumosa aurea*; 6. *Biota*. (W. P.).—*Polygonum affine*. (T. L. M.).—1. *Ceanothus Gloire de Versailles*; 2. *Leycesteria formosa*; 3. *Delphinium Belladonna*. (J. F.).—1. *Lantana delicatissima*; 2. *Gleditsia sinensis*; 3. *Rhus Cotinus*. (G. C.).—*Selaginella*, names sent by letter.

## Covent Garden Market.—Sept. 3rd.

### Average Wholesale Prices.—Fruit.

|                          | s. d. | s. d.  |                         | s. d. | s. d.  |
|--------------------------|-------|--------|-------------------------|-------|--------|
| Apples, English, dessert |       |        | Melons, each ...        | 1 6   | to 2 0 |
| ½-sieve ...              | 4 0   | to 6 0 | Nectarines, doz. ...    | 3 0   | 12 0   |
| culinary, ½ sieve        | 3 0   | 4 0    | Oranges, case ...       | 16 0  | 21 0   |
| Bananas ...              | 8 0   | 12 0   | Peaches, doz. ...       | 3 0   | 12 0   |
| Figs, green, doz. ...    | 2 0   | 4 0    | Pears, Williams ...     | 4 0   | 6 0    |
| Filberts, lb. ...        | 0 8   | 0 9    | " Jargonelle, ½-sieve   | 3 0   | 4 0    |
| Grapes, Hamburgh, lb.    | 0 9   | 1 6    | Pines, St. Michael's,   |       |        |
| Muscat ...               | 2 0   | 3 0    | each ...                | 2 6   | 5 0    |
| Greengages, ½-sieve ...  | 4 0   | 6 0    | Plums, Orleans, ½-sieve | 4 0   | 5 0    |
| Lemons, Messina, case    | 12 0  | 20 0   | " Naples ...            | 25 0  | 0 0    |

### Average Wholesale Prices.—Vegetables.

|                         | s. d. | s. d.  |                          | s. d. | s. d.  |
|-------------------------|-------|--------|--------------------------|-------|--------|
| Artichokes, green, doz. | 2 0   | to 3 0 | Lettuce, Cabbage, doz.   | 0 6   | to 0 0 |
| " Jerusalem, sieve      | 1 6   | 0 0    | " Cos, doz. ...          | 0 9   | 1 0    |
| Batavia, doz. ...       | 2 0   | 0 0    | Marrows, doz. ...        | 1 0   | 0 0    |
| Beans, French, lb. ...  | 0 2   | 0 0    | Mint, doz. bun. ...      | 4 0   | 0 0    |
| " broad ...             | 3 0   | 4 0    | Mushrooms, forced, lb.   | 0 8   | 0 9    |
| " Scarlet Runners       | 4 0   | 5 0    | Mustard & Cress, pnnt.   | 0 2   | 0 0    |
| Beet, red, doz. ...     | 0 6   | 0 0    | Parsley, doz. bnchs. ... | 3 0   | 0 0    |
| Cabbages, tally ...     | 5 0   | 0 0    | Peas, blue, bushel ...   | 3 0   | 4 0    |
| Carrots, new, bun. ...  | 0 2   | 0 3    | Potatoes, English,       |       |        |
| Cauliflowers, doz. ...  | 3 0   | 0 0    | new, cwt. ...            | 6 0   | 7 0    |
| Corn Salad, strike ...  | 1 0   | 1 3    | Radishes, doz. ...       | 1 0   | 0 0    |
| Cucumbers doz. ...      | 2 6   | 4 0    | Spinach, bush. ...       | 2 0   | 3 0    |
| Endive, doz. ...        | 1 6   | 0 0    | Tomatoes, English, lb.   | 0 4   | 0 5    |
| Herbs, bunch ...        | 0 2   | 0 0    | " Jersey ...             | 0 3   | 0 3½   |
| Horseradish, bunch ...  | 2 6   | 0 0    | Turnips, bnch. ...       | 0 2   | 0 3    |
| Leeks, bunch ...        | 0 1½  | 0 2    |                          |       |        |

### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                          | s. d. | s. d.   |                            | s. d. | s. d.  |
|--------------------------|-------|---------|----------------------------|-------|--------|
| Aralias, doz. ...        | 5 0   | to 12 0 | Foliage plants, var, each  | 1 0   | to 5 0 |
| Araucaria, doz. ...      | 12 0  | 30 0    | Fuchsias ...               | 0 0   | 0 0    |
| Aspidistra, doz. ...     | 18 0  | 36 0    | Grevilleas, 48's, doz. ... | 5 0   | 0 0    |
| Chrysanthemums ...       | 6 0   | 12 0    | Lycopodiums, doz. ...      | 3 0   | 0 0    |
| Crotons, doz. ...        | 18 0  | 30 0    | Marguerite Daisy, doz.     | 4 0   | 6 0    |
| Cyperus alternifolius    |       |         | Mignonette ...             | 0 0   | 0 0    |
| doz. ...                 | 4 0   | 5 0     | Myrtles, doz. ...          | 6 0   | 9 6    |
| Dracæna, var., doz. ...  | 12 0  | 30 0    | Palms, in var., doz. ...   | 15 0  | 30 0   |
| " viridis, doz. ...      | 9 0   | 18 0    | " specimens ...            | 21 0  | 63 0   |
| Ferns, var., doz. ...    | 4 0   | 18 0    | Pandanus Veitchi, 48's,    |       |        |
| " small, 100 ...         | 10 0  | 16 0    | doz. ...                   | 24 0  | 30 0   |
| Ficus elastica, doz. ... | 9 0   | 12 0    | Shrubs, in pots ...        | 4 0   | 6 0    |

### Average Wholesale Prices.—Cut Flowers

|                           | s. d. | s. d.  |                          | s. d. | s. d.   |
|---------------------------|-------|--------|--------------------------|-------|---------|
| Arums, doz. ...           | 3 0   | to 0 0 | Lily of Valley, 12 bnchs | 12 0  | to 18 0 |
| Asparagus, Fern, bnch.    | 1 0   | 2 0    | Maidenhair Fern, doz.    |       |         |
| Bouvardia, coloured,      |       |        | bnchs. ...               | 4 0   | 5 0     |
| doz. bunches ...          | 6 0   | 0 0    | Marguerites, white,      |       |         |
| Carnations, 12 blooms     | 0 6   | 1 0    | doz. bnchs. ...          | 2 0   | 0 0     |
| Cattleyas, doz. ...       | 12 0  | 15 0   | " yellow, doz. bnchs.    | 1 0   | 0 0     |
| Cornflower, doz. bun.     | 0 0   | 0 0    | Myrtle, English, per     |       |         |
| Croton foliage, bun. ...  | 0 9   | 1 0    | bunch ...                | 0 6   | 0 0     |
| Cycas leaves, each ...    | 0 9   | 1 6    | Odontoglossums ...       | 4 0   | 0 0     |
| Cypripediums, doz. ...    | 2 0   | 3 0    | Orange blossom, bunch    | 2 0   | 0 0     |
| Eucharis, doz. ...        | 2 0   | 3 0    | Roses, Niphetos, white,  |       |         |
| Gardenias, doz. ...       | 2 0   | 0 0    | doz. ...                 | 1 0   | 1 6     |
| Geranium, scarlet, doz.   |       |        | " pink, doz. ...         | 2 0   | 0 0     |
| bnchs. ...                | 4 0   | 0 0    | " yellow, doz. (Perles)  | 1 0   | 1 6     |
| Gladiolus, white, doz.    |       |        | " Generals ...           | 0 5   | 0 6     |
| bunches ...               | 3 0   | 4 0    | Smilax, bunch ...        | 2 6   | 0 0     |
| Gypsophila, doz. bun.     | 3 0   | 0 0    | Stephanotis, doz. pips   | 1 6   | 2 0     |
| Ivy leaves, doz. bun. ... | 1 6   | 0 0    | Stock, double, white,    |       |         |
| Lilium Harrisii ...       | 2 0   | 3 0    | doz. bun. ...            | 2 0   | 3 0     |
| " lancifolium alb.        | 1 6   | 2 0    | Sweet Peas, white and    |       |         |
| " l. rubrum ...           | 1 0   | 1 6    | coloured, dozen bun.     | 0 0   | 0 0     |
| " longiflorum ...         | 2 0   | 3 0    | Tuberoses, dozen ...     | 0 3   | 0 4     |





## A Wet Harvest.

Many years ago—we dare not reckon how many, but it was in our early childhood—the clergyman of our parish introduced a startling innovation. We had just begun to hear of harvest festivals and thanksgiving services on the safe ingathering of the crops, but he went beyond this, and asked his people to join in a supplicatory service at early dawn on that Monday morning when the general harvest was to begin. We remember going down to the church before the sun was fairly up to ask for the blessing of fine weather, and as children we felt so grieved and disappointed because, ere the breakfast hour came, the rain poured down in torrents. We do not quite recall how soon the weather cleared, but that early morning service made more impression on our mind than many an ornate harvest festival since. A wet harvest, what does it quite mean? It affects so many of us, and all adversely. No, perhaps not all; a wet time is a dragging time, and men must be kept to finish the work somehow. If the harvest is early and wet, and the wet is accompanied by warmth, things get on with a “bonny mess,” as the men would say. With upstanding light crops the difficulties are not so great, but should the crops be storm broken, i.e., that is beaten down, twisted, distorted, the work is hard indeed. Some fields look as though giants had made them their playground, and where to begin to reap is a puzzle. The ground is damp and soft, the machine drives heavily, an immense demand is made on the strength of the horses, a still greater demand on the machine, and the greatest of all on the temper of the foreman. Instead of easy, straightforward cutting, the machine is constantly getting clogged up. Very bad bits have to be mown by hand, and in no part of the field is a neat, tidy job made. Crops like this will not allow of the proper working of the self-binder, and the children will have to be called into requisition as band-makers once again; let us hope some will be found for the job. We have always been in favour of tying up corn as it was cut, and stacking at once, but there are crops which this year will have to be treated differently. We saw a field of Barley the other day full of good Clover, so tall and big; quite overmastering the grain crop. What can be done in a case like this? The Barley straw not over-fit, the Clover strong, long, and sappy, and it seems useless to tie it up as it is cut. Days are taking off, night dews are heavy, the sun of late has shone with no power, and the farmer may scratch his head in dire perplexity. There is not only the worry with the superabundant Clover, but these constant rains discolour the Barley, and at discoloured Barley no self-respecting maltster will look. Where the crops are laid the ripening is so uneven, so irregular, as to suggest when the grain is seen in bulk two or more varieties. Laid crops invite the wood pigeon, and much damage is done by these voracious birds; they instinctively seem to know where to find the soft milky grain which their soul loveth. If the field be near the village, sparrows, too, will be much in evidence.

A wet harvest means a slow one, and so the end of the months comes and the work is not done, and the higher rate of wages must still be paid, or, if not quite that, concessions have to be made. Work has to be found during the wet days, and what to give them to do sometimes fairly beats master and foreman. In old days much time was put in in the barn, twisting straw rope for thatching. That now is obsolete, string of all sorts being good and cheap. The wet that hinders harvest work is very productive of weeds among Turnips and Mangolds.

All manure is led, and stackyards cannot be cleaned up for ever, and by this time all weak places in the fences will be made up. There is another phase of the question to consider. Corn not fully dry cannot be threshed, and we do not know from our own observation where the straw for thatching is to come from, and straw that has been much weathered loses some of its best qualities. And there

is another thing very much lacking among farmers till they can get a bit of Wheat on the market, and that is money; how scarce it is we dare not surmise. Harvest wages to be met and current expenses, and nothing much to turn into money. Then there is the anxiety as to future work. Those who are looking forward to the Potato harvest wonder when those tubers will be safely housed. There are stubbles to plough, but they cannot be ploughed till cleared, and no Wheat can be sown till the Potatoes are lifted. We can only hope and pray for a fine and long back-end.

There is another little matter which perhaps affects the ladies of the household most—we refer to the absence of “hen corn.” Ours has been done a long time, and still the fowls must be fed, and it is just at this season that farmers’ fowls, as a rule, suffer. There is a disinclination to buy, and the fowls go often with half rations, or indeed little more than they can pick up, and they face, or perhaps go through, the moulting season ill-prepared for the extra strain on the system. We are buying meal, and we find it pays; there are plenty of eggs, and the fowls look the picture of health. The new corn must come soon, we have always been promised a harvest, and the promise has not failed yet.

Fortunately, a wet harvest now is not so disastrous to bread consumers as formerly. Who among us can remember the soft, sticky bread that was made from sprouted corn? Bread that was warranted to give indigestion to the strongest, and which was absolutely unfit for the invalid or child. We have changed all that, and although we grumble at the wretched price now obtainable for our corn, we cannot but be thankful that we can produce good, sound, dry corn to grind for our daily bread. The present generation cannot at all enter into the difficulties that beset their elders in this matter; they have been so used to the best flour and no offals that they would take ill to the soft bread resultant on a wet harvest. There is always some contributing country where the sun has prevailed, and the Wheat is firm and dry. There will be much shifting of stacks, taking the hedge-side ones out into the middle of the close, turning bottoms up to the sun, and let us hope to the wind, that admirable medium for drying. There will not be much corn left this year to get over-ripe, the anxiety will be to cut as early as possible; there is no time to be lost. The harvest moon will come and go without having served its end, and the sun will go down all too soon. It makes such a difference an hour or more less of daylight at either end of the day. The heavy dews, that are as searching as rain, fall early and disappear with reluctance, and the evening shadows fall while yet the work is but half done. We were going to say a word in pity for the gleaners, but they appear an extinct race. Who could glean with flour at 1s. 3d. per stone? Here is one word of warning to those who have stooks on seeds. If they have to stand long, move the stooks.

## Work on the Home Farm.

We began the past week with a small deluge, but since then we have enjoyed five successive fine days with a good amount of sunshine. The crops are ripening rapidly, and the harvest has commenced in the neighbourhood, though there is nothing yet ready here. Oats and Barley, especially the latter, are inclined to die away too quickly, and there is a fear that good malting qualities may be scarce. Samples will be very uneven, for the laid portions of the crops are quite dead, and some of the standing comparative green. The appearance of more settled weather is giving farmers more confidence in their self-binders, and they will be generally used after all. Report says they are doing good work so far. The land is a little soft for them, but it will soon be hard enough if the weather holds. We should not care to string-bind some Barley we saw a day or two ago, with alsyke level with the cars. Alsyke is very useful for pasture, but it is dreadful to harvest except under very favourable conditions. We have always avoided it for that reason. In a dry summer it is all right, and its success during the late droughty seasons have stimulated its use amongst sheep farmers. The best way to deal with a crop full of tall alsyke or cowgrass would lead to considerable difference of opinion. Some would mow it or reap it, and leave the Barley to dry in swathe or sheaf, not tying it up until it is ready to stack. This would do if the weather were settled and there were no very heavy dews. We should prefer to mow or reap with a self-raker, and tie the Barley up by hand immediately. If it is well and carefully stooked it will dry as quickly in stook as it will on the ground, and the grain will not be so liable to staining. Heavy dews spoil the colour very much when the Barley is exposed to them.



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## Journal of Horticulture.

THURSDAY, SEPTEMBER 11, 1902.

### Wanted—Inventors.

**P**ERHAPS in no other trade or profession are there such golden opportunities for the inventive genius as exist in the improvement of implements and apparatus for use in the garden. If we make but a cursory examination of the tools which a gardener uses in his work—such as the spade, the hoe, rake, and fork, and others too numerous to mention—we cannot fail to notice how primitive and old fashioned these are, most ungainly in these days of labour-saving devices, for the work which they have to perform.

While the hybridists have been making such vast strides forward by the raising and selecting of new varieties, and the improvement generally of existing kinds, it may be safely asserted we are not only up-to-date in this respect, but, compared with other branches of horticulture, even in advance of the times. The same may be said of the cultivator and his methods, which have, during the last decade, certainly undergone a change for the better; (this probably being brought about by the greater facilities enjoyed by young gardeners of the present day, through the medium of schools, books, and gardening papers, these giving him a distinct advantage over his predecessors, whose attempts at self-education will stand out for all time as marvels of patience and perseverance in the face of almost insurmountable difficulties, and a worthy example indeed to all succeeding generations of gardeners.

Yet, while we have advanced so far in these directions, the improvement of garden apparatus seems to have been entirely neglected; in fact, the mechanical part of horticulture is almost at a standstill, and the importance of improving the ordinary

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work-a-day implements for gardening purposes does not yet seem to have been realised by head gardeners and nurserymen. Gardeners as a body are very conservative, and they regard with suspicion any useful invention that is likely to alter the old order of things. However, in these days of keen competition and rigid economy any useful invention which will save time and unnecessary labour should be given a fair trial, and if found satisfactory it should be at once adopted.

I believe there are many gardeners and others who have an idea in their minds for the improvement of one thing or another; but perhaps owing to lack of mechanical knowledge they are unable to bring it to perfection. To such a one it would be surely advisable to consult an expert rather than lose such an opportunity of benefiting not only themselves, but all the community at large. Indeed, it is these crude ideas and chance suggestions which have been the origin of some of the most wonderful mechanical devices of modern times.

Perhaps it would not be out of place to suggest one or two things in use in the garden which would be all the better if some brilliant individual with brains would come along and exercise his talents with the worthy object in view of superseding these relics of bygone days. Now, there can be nothing more simple than the humble but necessary flower pot. Nothing, I am sure, could be invented which would suit the requirements of a plant better than those now in general use. It is, however, almost incredible that someone has not made one that would practically be unbreakable, although, at the same time, it would remain porous, and also inexpensive, so as to be within the reach of all. An invention of this description alone would have a very beneficial effect on the yearly garden bill, and consequently upon the gardener also.

The syringe, again, is a very important article to a gardener, and one which is generally getting out of order, as the unfortunate operator generally knows to his cost. While it is promising to see several important changes in these, they are, however, still far from perfect. Indeed, some of them are as unwieldy as the ones they were intended to supersede.

It is almost idle to mention individual objects which would pass through the hands of the inventive genius and yet come out scatheless. There is barely an implement which would pass through such an ordeal. What a chance for young men with brains! Why should we go plodding on, content with the hard work and low wages, when there is a fortune at our very feet only waiting to be picked up? Many men have a taste for experimenting, both scientifically and mechanically; here, then, is a totally unexplored area open to all comers, although gardeners perhaps stand the best chance, owing to their practical knowledge of the requirements of plant life. In the long winter evenings which will soon be with us, it would be well to ponder over these suggestions with a view to conduct some experiments, however small, having for their object the improvement of all gardening tools and apparatus.—H. MUNCEY.

## Town Trees.\*

The Horse Chestnut (*Æsculus hippocastanum*) has fared better this year than the Limes. Grand as is the leafage and beautiful as are the flowers, the trees (now early September) far from beautify their locations in smoky districts and building-heat-reflected situations, for some trees retain but a sere remnant of summer clothing. Even in country towns there is a strong objection to be placed against the common Horse Chestnut, that of its spiny capsules and large shining seeds on footpaths and roadways, involuntary penancing pedestrians in autumn, and whilst on the trees stone-throwing boys cannot resist the inducement of a "sling." The double flowered variety is not open to this drawback; but it also has parted with most of its leaves, therefore must be placed in the same category as the species, both very little better for not turning "seedy" and become leafless earlier than Limes. Neither aphides nor red spider can be saddled with the mischief, therefore I must put it on the thin texture of the leaves and their indifferent resistance of drought.

### The Chestnuts.

The red or scarlet-flowered Horse Chestnut (*Æ. rubicunda*) is in some cases leafless and in other instances fast parting with the foliage. This is very regrettable, as it produces very fine terminal racemes of flowers, and is a very distinct and beautiful tree, and does not attain so large a size as the common Horse Chestnut, usually not more than half, hence not calculated to outgrow the space.

Of the Smooth-leaved Horse Chestnut (*Æ. glabra*), with its greenish-yellow flowers and very smooth leaves larger than in the common species, the evidence is meagre, but what there be points to very little better adaptation for resisting the heat-reflected influence of town atmospheres. For country towns this and the scarlet are very fine in the early part of summer; but the leaves will not stay on the trees in droughty seasons without littering after August, and capsules dropping on footways are a source of inconvenience to pedestrians.

### The Elms.

Passing to the Elms as next least resistant of town reflected heat and drought, the field-loving or so-called English Elm (*Ulmus campestris*) has withstood the weather and its enemies—the frog, cuckoo or jumper fly (*Euacanthus interruptus*), and red spider (*Tetranychus telarius*)—better than the mountain loving Scots or Wych Elm (*U. montana*) for its leafage has been made whitish, especially near the midribs, and the leaves are falling in showers, the result of red spider work.

The Cornish Elm (*U. c. cornubiensis*), with its small, strongly veined, coriaceous leaves, bright brown, smooth, flexuous, and compact branches when young, but, unlike man, becoming erect with age, has battled bravely, and occupies comparatively little space on account of the narrow branches, spread in proportion to the tree's height. Similar remark applies to the Exeter Elm (*U. m. fastigiata*) and to the purple-leaved (*U. m. purpurea*), the red spider not liking the leafage of the latter variety so well as that of the green-leaved forms.

But of all Elms for vigour and keeping clean, not any approach the Chichester or Huntingdon form of the smooth-leaved Elm (*U. glabra vegeta*), the tree attaining a height of 30ft in ten years from the graft. The record of this and the preceding species or varieties of Elm apply to country towns; for in smoky districts the trees in their various degrees are in sore distress, some leafless and others with but scanty and sere foliage. In no sense, however, are Elms so defoliate as the Limes and Horse Chestnuts. The latter do not submit readily to pruning. Elms, on the other hand, though not as tractable as Limes, bear almost any amount of lopping, not only with impunity, but with advantage, as the young growths from their greater vigour are more resistant of the adverse influences of town atmosphere, and when the trees are becoming aged, there being no question of their doing this prematurely in smoky districts, pollarding gives the trees a new lease of life, and is the best of all preventives, or even cures, if taken in time, of the attacks of the Elm bark beetle (*Scolytus destructor*).

### Hornbeams.

Hornbeams find little favour in the eyes of the town planter, though not any trees better endure rough and windy situations and thrive in poor conditions of soil. It forms a good hedge plant and bears pruning well, hence submits to restriction and with benefit, always provided the pruning, with the object of securing a vigorous growth, be done in the winter time. Of all trees, this Hornbeam (*Carpinus betulus*) is the most liable to possess "witches' besoms," which render it very singular in the winter time, some having the "brooms" at the ends of branches, as is common also to Birch, and then very interesting to lovers of Nature. The Hornbeam fares badly in smoky towns, and even in open ones suffers from attacks of various insects, especially small caterpillars, which riddle the foliage. Even this may be an advantage, as affording food for the insectivorous birds, which are not the least desirable accompaniments of town sylvanry.

### The Birches.

Birch (*Betula alba*) is simply the "queen" of country towns as well as "of the woods." No other tree combines so much elegance and graceful beauty, and even in fall of leaf the tints of rich yellow, scarlet, or red are "pleasant to the eyes." The drought and reflected heat of confined spaces trouble the silver, white, or common Birch, and it has marked its dislike by shedding its leaves, which, littering in September, are neither pleasing nor safe. Of the varieties of common Birch, the white and purple leaved (*B. a. albo-purpurea*), with leaves rich purple and a metallic lustre above, pale beneath, branches sub-pendulous, is very effective. The weeping Birch (*B. a. pendula*) strangely, like the weeping Ash, bears town impurities better than the common Birch, while its leaves or shoots are more slender and smoother. Of the cut-leaved weeping Birch (*B. a. laciniata pendula*) Young's variety is the best, the leaves being deep green, and deeply cut (lacinated). Of relatively small trees not any are more lovely than the Birches.—G. A.  
(To be continued.)

\* A full notice and description of the genus *Tilia*, or Lime Trees, forming one of the articles of this series, was given on July 25, 1901, page 74.—ED.]

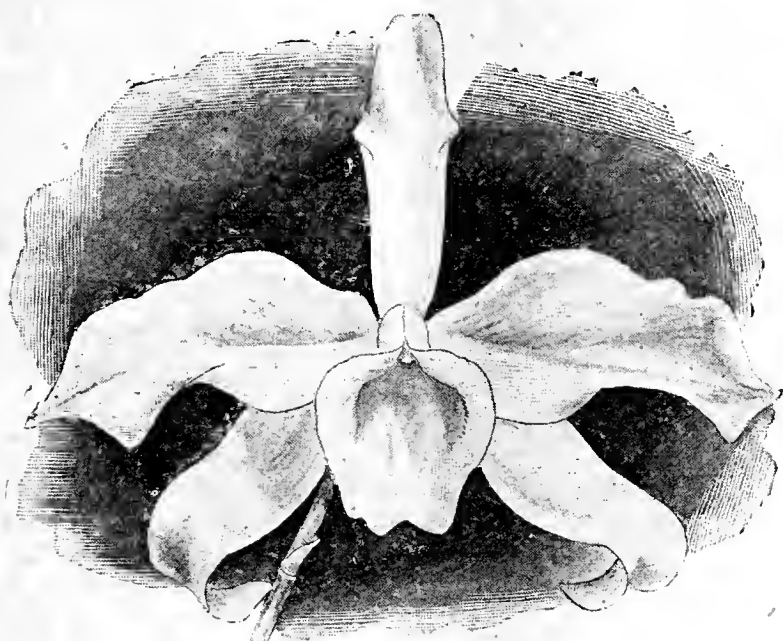


### **Dendrobium nobile album.**

On several occasions during last spring plants of this exquisitely beautiful small flowered Dendrobium were exhibited in the Drill Hall. The variety first received a First Class certificate on March 27, 1900, when shown by Mr. J. Davis, gardener to J. Gurney Fowler, Esq., treasurer of the Royal Horticultural Society, and whose residence is The Glebelands, South Woodford, S.E. Our illustration shows the form and size of the variety very exactly.

### **The Week's Cultural Notes.**

The present may be described as a halting time between the two seasons in Orchids. Most of the summer flowering sorts are gone, and the showiest of the autumn ones are not yet. Still there is plenty of interest in the houses and plenty to do. Repotting will be in full swing in the cool house, and re-arrangement



**Dendrobium nobile album.**

in the warm and intermediate sections. I am not an advocate of shifting Orchids about unnecessarily, and when the best place for a certain species is found I like to leave it there; but independent of all this, there are times when a move is necessary.

Cattleya Harrisoniae is going out of bloom, and may be kept a little on the dry side, but allowed sufficient moisture to prevent shrivelling. A light position close to the glass is needed by this pretty species now, and it does not require any great amount of heat. C. superba on the other hand is just coming in, and the plants like ample heat and moisture right up to the time when the blossoms commence to unfold, a drier atmosphere being then needed to conserve the latter. C. Gaskelliana is busily rooting, and if the plants are in need of it there is no reason why they should not be repotted.

One of the most singular Orchids I know as regards culture is Lælia lobata, or Boethiana, as it is sometimes called. Pot it regularly; treat it well in all respects of heat and moisture, and other cultural details, and as a result it will grow everlastingly, but as for a flower you will never see one. Starve it by letting it grow out over the sides of the pot or basket, bake it in the summer sun, and be not too particular about its winter treatment, and most likely you will be rewarded by its lovely flowers in plenty. And they are very beautiful in their rich rose and purple tints, refined and delicate, yet making a brave show.

Among the Dendrobiums there will be some plants and species to remove from the growing quarters every week. The earlier plants of D. nobile and D. Ainsworthi, D. crassinode, D. Wardianum, D. Bensoniae, and D. Pierardi are amongst those now ready, while the majority of the evergreen section have by now finished their growth for the season. As soon as the last leaf is complete, and the apex of the new stem can be seen, take them at once to drier quarters, as a secondary growth starting now breaks the proper cycle of annual growth and rest.—H. R. R.

## **Lilies of the World.\***

The height given to each Lily must be accepted as comparative. In some moist soils the Lilies may grow higher, while in dry soils they may not attain the height named. For example, established clumps of L. auratum, L. pardalinum, L. superbum, L. Canadense, L. testaceum, &c., in moist soils may reach a height of 8ft or more. And so on with all the other Lilies.

In the Municipal Gardens L. longiflorum eximium attains a height approaching 5ft. I have never seen it before so tall, except when grown under glass. I have seen L. speciosum grown under glass attain a height of 10ft. Out of doors in England its extreme height is seldom over 4ft. Everything depends on the quality of the soil and the surroundings. If Mr. Arderne takes to cultivating Lilies amongst his Rhododendrons the maximum height will be attained there, and an effect as a floral display exceeding that of his grand show of Rhododendrons. You all know how superb this is.

European Lilies (genus Lilium), of which there are upwards of forty, mostly wild species:—Davuricum erectum (colour, rich cerise-scarlet, shading to yellow), height 2½ft. Davuricum Incomparabile (colour, intense rich crimson, freely spotted), height 2ft. Davuricum Sappho (colour, scarlet, shading to orange, moderately spotted), height 2ft. Candidum (the snow-white Madonna Lily), height 4ft. Chalcedonicum (the Scarlet Turk's-cap Lily), height 3ft. Croceum (the cottager's Orange Lily), height 4ft. Martagon album (the White Turk's-cap Lily), height 4ft. Martagon dalmaticum (the rich dark purple Turk's-cap Lily of Dalmatia), height 5ft. Pomponium (the graceful Scarlet Turk's-cap Lily of the Maritime Alps), height 3ft. Testaceum (the noble apricot-coloured hybrid Lily), height 5ft.

I notice in "Thompson's Gardener's Assistant" (last edition) that Mr. Van Houtte, of Ghent, Belgium, gets the credit of having raised this valuable Lily. I do not know where the editor got his data from, and very much doubt its correctness. Mr. Max Leichtlin, of Baden-Baden, a former student of Mr. Van Houtte's, made a careful investigation as to the origin of this Lily, and after much research, found it came originally from the nursery of Mr. Matthews, of Berlin, Germany. When questioned, Mr. Matthews could give no account of how it came into his possession, but was aware it got into circulation from his nursery. That it is a hybrid has been proved by Lieutenant-Colonel Clark, F.R.H.S., having succeeded in producing it by crossing L. candidum with L. chalcedonicum. I am particular on this point, as some works mention it as a Japanese Lily, and others state it is the Chinese Lily. I may further state it is the only really good hybrid Lily raised up to this time, as far as is known.

Japanese Lilies (genus Lilium) of which there are upwards of fifty species, mostly wild species (nearly all Lilies are used in Japan as an article of food), and I may add from what I saw on the hills and in the woods of Japan, there are still varieties of Elegans not yet in culture:—Auratum (the golden-rayed, crimson spotted hill Lily) type, height 5ft. Auratum pictum (colour, white, beautifully spotted crimson, petals tipped red), height 5ft. Auratum platyphyllum (enormous white flowers, spotted crimson, height 7ft. Auratum rubro-vittatum (colour, pure white, with a broad crimson band down the centre of each petal), height 4ft. Auratum virginale (large pure white flowers, with a golden band down the centre of each petal), height 6ft.

In the early days of the trade with Japan the hills around Yokohama were covered with this species, only a few are now to be seen, so that collectors have to go further afield, as the type is found wild all over the southern island. It is not yet fully known what Lilies are wild in the northern island of Japan. Some of the varieties of L. auratum offered by name are selections from the type, but in the case of platyphyllum, rubro-vittatum, and virginale, these are said to be found apart from the type. My informant told me they grew on islands off the coast. The three latter are propagated around Tokio from scales, while the large quantities of the type exported are collected in their wild habitats, and grown on and fattened up for the market. The wild bulbs are sized and cultivated from one to three years before they are marketable. Whether this fattening up has anything to do with their short life in our gardens is a question of which I am very much inclined to doubt. My opinion is that the short life of the bulb arises from their surroundings, which in most gardens may be attributable to uncongenial soil and climate, and perhaps too shallow planting, which does not give the stalk-roots a fair chance, and the bulb-roots an opportunity to play their part in the economy of Nature, and being so very cheap most people prefer to buy them annually as they do Hyacinths.

I remember in early days that the gardeners were frequently blamed for the bulbs disappearing. I have myself lost thousands of this Lily when I made an attempt to class them into a few good, distinct varieties. I planted largely and made descriptions up to 1200, but finding each year my stock almost disappear,

\* A descriptive list of Lilies (genus Lilium) likely to succeed in the Cape Peninsula and South Africa generally, with historical notes, and, when necessary, special cultural directions. Read at the monthly meeting of the Sea Point Horticultural Society, November 29, 1901. By Peter Barr, V.M.H., London.



I saw my labour was fruitless, and called off. Since then I have discovered the reason, and through the large importations and the comparatively low price of the bulbs grown in Japan, it was time lost to raise stock in England. If Mr. Arderne or anyone growing Rhododendrons would plant some *L. auratum* amongst their Rhododendrons, I think they would establish them, and if successful, which I feel sure they would be, their reward would be plants 10ft high, with immense heads of bloom.

Mr. McIntosh, of Walton-on-Thames, England, had annually a glorious display of *L. auratum* ranging from 6ft to 12ft high. When in bloom it would be indeed a very dark night if anyone accustomed to the garden failed to find their way about by the aid of the great blocks of these white flowers. It is true he was always buying fresh bulbs, but this was to extend his culture. I never heard of him having to replace deaths. His garden was undulating, his soil was very light, and to keep his Rhododendrons in good condition he had hydrants all over his place, and made a free use of the water, an absolute necessity to keep his Rhododendrons in condition. The drainage being good, the Lilies enjoyed the waterings. The stems of these *auratum*s were usually 4in to 4½in in circumference, and so strong that they were able without stakes to carry their immense heads of flowers. On the west of Scotland I have known one case of bulb being planted, and in five years increasing into such a mass as to completely fill a bed. A photo of this *auratum* will be found in the "Gardeners' Chronicle" of 1899; I think the month of May.

*Elegans* (*Thunbergianum*). This family is very numerous. I have seen them on the hills of Japan growing with scarcely any soil, and the stalk not much longer than the flower (3in to 4in), and I have found them in the woods in rich vegetable soil, 3ft high; but the stem, always feeble, being drawn up by the shade of the leaves, the colours are lovely. I will name a very few of the many in commerce.

*Elegans Batemanæ* (colour, rich glowing apricot-red; late flowering), height 3ft. *Elegans Alice Wilson* (large lemon-coloured flowers), height 2ft. *Elegans Beauty* (large brilliant orange flowers, shaded red), height 2ft. *Elegans G. F. Wilson* (flowers, apricot colour, large and erect, spotted purple, with a central yellow streak on the petals; late bloomer), height 2ft.

*Elegans Prince of Orange* (colour, clear apricot orange, spotted black), height 1ft. *Elegans robustum* (colour, large orange-yellow, with bold heads of large handsome flowers, spotted crimson), height 2ft. *Elegans Sunset* (colour, a beautiful glowing golden-chamois; large, handsome, free flowering), height 2ft. *Elegans Van Houttei* (large rich blood-erimson flowers, blotched with gold and spotted black), height 1½ft. *Elegans Wallacei* (very distinct; flowers rich glowing apricot-orange; very handsome and late flowering), height 2½ft. *Hansonii* (the Japanese beautiful yellow Martagon Lily), height 3ft. *Japonicum odorum* (the long funnel-shaped large flower, opens chrome-yellow; outside streaked dark chocolate-brown), height 3ft. *Leichtlini* (flowers golden yellow, spotted crimson, and gracefully arranged on the stem), height 4ft. *Longiflorum eximium* (this I need not describe; it can be seen in the Municipal Gardens in great quantity), height 4ft to 5ft. *Longiflorum robustum* (this fine species is distinct from *eximium*, and would be a good addition, long pure white funnel-shaped flowers, reflexed at the mouth; the stem towards the base is coloured black), height 3ft. *Speciosum album Crown Princess* (very floriferous; handsome fine white flowers), height 3ft. *Speciosum punctatum* (flowers white with faint rose spots and yellow anthers), height 3ft. *Speciosum punctatum album* (large snowy white flowers with yellow anthers and broad light green foliage), height 3ft. *Speciosum purpureum* (large purple-rose coloured flowers, heavily spotted crimson-purple; robust grower), height 3ft to 5ft. *Speciosum roseum album*, variety *Kraetzeri* (beautiful, large, pure white flowers; in the claw of each petal is a pure green line), height 3ft. *Speciosum rubrum Melpomene* (rich dark crimson, handsome flowers, heavily spotted purple, with each petal margined clear white), height 3ft. *Speciosum rubrum multiflorum* (suffused and spotted rose on a white ground, profuse flowering), height 3ft.

The species of *speciosum* rank amongst the most useful and beautiful of the Lily family, and are widely spread throughout the English-speaking countries. I was greatly surprised at not finding it common in the gardens of the Cape Peninsula; it is of the easiest culture.

*Tigrinum Fortunei* (stem covered with a white down, and surmounted with numerous rich orange-scarlet, beautifully spotted flowers), height 4ft. *Tigrinum Fortunei* double (the flowers of this handsome plant are perfectly double, and a rich orange-scarlet colour spotted crimson-brown), height 4ft. *Tigrinum splendens* (stem almost black, surmounted by a large pyramid of bright fiery orange-scarlet flowers), height 4ft.

The *Tigrinums* are almost as universally cultivated as *L. candidum*, and greatly prized; when seen in established clumps the effect is grand. In the leaf axils there are bulblets, which if gathered when ripe and looked after soon grow into flowering bulbs. The Japanese Lilies are generally of great beauty and easy culture, and those I have enumerated are exceptionally so.

(To be continued.)

## Economy.

"His ability is unquestioned, but his extravagance was unwarrantable," was the verdict, verbatim, of a good master on a clever gardener at the parting of the ways—their ways—which often crossed, the crisis coming contemporaneously with a batch of bills. Both master and man, however, have long since settled all mundane accounts, and in raking up the ashes of a dead past, perish the thought of any personal inference being deduced by readers of to-day, old or young; but the latter, at least, may find the subject furnished by our text worthy of their consideration, for frugal and thrifty management of a garden is grateful to employers, commendable in gardeners, and to both a highly desirable thing. Bills, too, are still troublesome; masters still as ready to make rough calculations of returns against cost of production, and still as apt to omit important figures which make the "tot" as untrue as it is misleading; hence, assuming that a sufficiently true bill is here presented for a brief study of economy, the general expenses of garden maintenance may be taken under sectional heads, the first and probably most prominent being

### The Labour Bill.

Cheap labour, like other cheap things, is often dear and unsatisfactory. Local circumstances, however, so generally control the wages question as to neutralise any action or opinion of the gardener; hence, momentous as the matter of wages may be, it is more or less excised from discussion. Apart from the question of overtime, which if done without may be something off the bill, it may be said that any direct reduction, short of lessening the number of hands, which is often a pennywise policy and seldom expedient, is not practicable. That is so. With a permanent staff and fixed wages economy of labour practically resolves itself into the management of men. The annual expenditure may stand at a set figure, but good generalship will ensure the highest return for the outlay, and there economy comes in.

A life's experience with some study of one's fellow men and their methods leads to the inference that head gardeners are as diverse in their modes and manners of government, and as open to criticism, as were our generals in conducting the South African war with, in their own way, as many difficulties to encounter. What fine studies of character there are, too, amongst the labourers! There is the fussy man, and he is generally talkative to boot, so anxious to impress the overseeing eye with the quantity of work he is doing, with an immodest amount of faith in himself and the importance of his personality on the staff. A good man he is, doubtless, in his way—his own way—but he is not the man after a head gardener's own heart. There is the schemer, with one eye for his work, the other being reserved for the special duty of watching your goings and comings, and the way he has by some Marconi method of letting all hands know when business calls you to the city or elsewhere, seldom failing, although based on such slight evidence as any small change in the more permanent parts of one's apparel, is highly creditable to his powers of observation. He was never better exemplified than in old Tom H., garden painter, glazier, and general handyman, whose rubicund visage, reaching the climax of colour where nasally projected, a leading light he had followed all his days, eloquently corroborated the oft repeated assertion, "I loves a drop o' good beer." Like the renowned Major Bagstock, Tom was "cute," yet on one memorable occasion his cuteness signally failed him. It was a day when Tom, ostensibly painting the roof of the big range, was in reality peeping from the depths of a deep gutter which lay between the roof and a high sustaining wall, noting t' Gaffer drive off for T— Station, en route for London, 140 miles away. How it happened we bothyites never knew, but happen it did; in less than an hour t' Gaffer's head and shoulders loomed high over the ladder top, just after "a drop o' good beer" in the shape of a gallon jar had been hoisted aloft, and was being broached by old Tom, aided by two of the faithful (?). Sequel, the sack. Sub-sequel, prayers, promises, and threatenings, and back in a week. And so went on the watchful, dodgeful policy to the end of the chapter.

Needless to illustrate more of the types so often met with and so well known, amongst which is the plodder,

always at it, yet by some clever sleight of hand and foot contriving to spin one day's work over two. The man who tootles through the day "We won't go home till morning," but is the first to slip off at night. Thankful one is to say there is the honest, loyal labourer, good to see, to speak to, and to have; a man who looks you straight in the face, and whose daily labour seems one of pleasure instead of painful task. His moral influence in the garden is incalculable, and to the gardener—his master—he is a tower of strength.—QUIZ.

(To be continued.)

## Old-time Gardening.

(Continued from page 123.)

### Trade and its Effects.

Trading companies, e.g., the English Merchant Adventurers, and the Hanseatic League, or Steelyard Company, had been engaged for centuries in an import and export trade with England previous to the period under review, the end of the sixteenth century; but their operations did not extend beyond the Continent and its great trade emporiums, whence the products of the East were gathered, to be sparingly distributed in the ports of England and Scotland. Chancellor's discoveries in Russia about the middle of this century produced a great impulse in trade. That was further increased by others who followed, and who pushed farther afield into Persia and other countries of that marvellous East, the goal that all adventurers were endeavouring to reach, whether from the north-west, the north-east, or the southmost extremities of the two vast continents which stretch far into southern seas.

Capital was freely provided by noblemen, merchants, and others, and the reports submitted by agents prove that all alike were animated by a sincere desire to obtain useful knowledge, as well as to extend legitimate trade. Chancellor's first report descriptive of Muscovia, as in reports made by others, contains very fair notes on native vegetation, and the uses to which it was put by the inhabitants. Some items are perhaps just a little exaggerated, or incline to the marvellous, as in the report of Jenkinson, who tells of "Pineapple trees lying along within the ground, which by report have been there since Noe's flood."

A copy of instructions by Richard Hakluyt, cousin of the "Collector" of voyages, "to Arthur Pet and Ch. Jackman for the Discovery of the North-East Strait," is altogether interesting. They were to bring home, among other things, dried fruits of the countries visited, and "kernels of Peares and Apples and the stones of stone fruits, seeds of all strange herbs and flowers, for such seeds of fruits and herbs coming from another part of the world, and so far off, will delight the fansie of many for the strangeness, and for that the same may grow and continue the delight for long time." A lengthy list of "Things to be carried with you" includes "Prunes damaske, Dried Peares, Walnuts, Almonds, Smal Nuts, The Apple John that dureth two yere to make show of our fruits." They were also to endeavour to find a market for Saffron, "because this realme yeelds the best of the world." "Garden seeds as well of sweet strawing herbs and of flowers, as also of pot herbs and all sorts of roots," were to be carried with them for sale.

The company promoting these enterprises had been urged to secure a direct trade with Syria and other Eastern countries before the Dutch could step in, and as a result in 1581 a charter was applied for and granted to the Levant Company, by whom direct business relations were opened with Turkey. Hakluyt's instructions to the Factor of this concern at Constantinople in 1582 reiterates the desirability of importing examples of rare vegetation, and as an inducement he gives a list of fruits, &c., that had been introduced by various persons, "and now," he concludes, "within these last four years there have been brought into England from Vienna in Austria divers kinds of flowers called Tulipas, and these and others procured thither a little before from Constantinople." In 1585 the Morocco Company was instituted, and in 1588 the Guinea Company received its charter. Private merchants, too, opened agencies in suitable centres, and we discover not

a few instances of new plants being introduced through their efforts.

In the year last named an interesting account of Virginia as then known was written by Thomas Hariot, "servant to Sir W. Raleigh." Hariot was a man of more than average ability, and very painstaking, and the "Commodities of Virginia" contains not a little worthy of notice by the horticulturist. Maize, Tobacco, and the Potato excited most largely his interest, and the description of the latter, as it is the earliest on record, may be transcribed as an example of his method. Native designations, it may be explained, are used in all cases. "Openawk," he writes, "are a kinde of roots of round form, some of the bignesse of Walnuts, some far greater, which are found in moist and marish grounds growing many together one by another in ropes, as though they were fastened with a string. Being boiled or sodden they are very good meate."

The expedition of which Hariot was the naturalist left England in 1585 and returned in 1586. Whether samples of the Potato were brought back is doubtful, though it was already known on the Continent, and Clusius mentions having acquired the plant in 1588. Lane, the commander of the expedition, is said to have introduced Tobacco, but Hakluyt shows its seeds to have been imported from "West India" several years previously, and it had been cultivated in Spain for nearly forty years in advance of this time. It will be apparent that the wonderful activity displayed by the English during the latter half of the sixteenth century, alike in promoting discovery of regions hitherto unknown, and in taking means to extend their trading boundaries, must have had a marked effect on gardening.

Previous to, and even during this period, novelties in plants were procured at second hand from Continental sources, as was the case with Tulips, the introduction of which by Busbeguus and others caused the greatest excitement in almost every European country. Flowers, as flowers, were perhaps not very highly esteemed, and it is a curious fact that any plant not useful as a food or a medicine was always recommended in a somewhat apologetic manner. Some of the earliest Tulips were indeed lost because the recipient, deeming them to be edible, made his supper off a number, and planted others in his garden for future use. When, however, the Tulip in its great variety was seen in flower, along with Narcissus, Crown Imperials, and other plants from Constantinople, a new era dawned in the history of gardening. Roots of these rare plants could be procured only by favour, and sometimes at a great price, and Lobel gives the names of the chief cultivators in several countries, just as to-day certain horticulturists obtain more than a local fame for certain plants.

The introduction of so many exotics had, moreover, a marked effect on the calling of the gardener. Previously, when the number of subjects cultivated was confined to a not very large collection of plants, many of which were indigenous, or so long established as to be practically so, gardening was unquestionably a matter of rule of thumb. Now, however, a gardener had to think for himself; he had to discover methods of culture suited to novelties, causing him to break from the time-honoured practices of ages and to establish new systems for himself. There was, too, a general extension of gardens, and Stone mentions a high-handed act of Elizabeth's favourite, the Earl of Essex, who enlarged his garden at the expense of the chronicler's father and others, and actually moved Stowe's house back 20yds to procure more ground for his garden!

Gerarde's "Historie of Plants," more generally recognised as the "Herbal," appeared at this time. Unlike other Herbals that had previously appeared, it not only discussed the more legitimate points suitable to books of that nature, but it also treated of many plants quite novel to the great majority of garden lovers of that period, and gave slight historical notes of their introduction, and how they had been treated by the writer, however, not always with that success which authors like to record. For these and other reasons the book became a classic on gardening, not even the "Paradisus" of Parkinson, published thirty years later, seriously affecting its popularity. These remarks, it is hoped, will make a short study of Gerarde's great work more clear.—B.





#### Plants at Victoria Park.

For the filling of a very large span-roofed house in Victoria Park, London, E.C., Mr. J. W. Moorman, the superintendent there, raises some thousands of Chrysanthemums annually. His collection this year are in very good condition, the leafage being generally stout and plentiful, the wood and growths firm for the season, and buds are promising nicely. There are even batches of Mrs. Barkley, with buds already prominent; Edwin Molyneux, too, promises admirably, and its needs seem to be understood by the grower. Mrs. Carpenter, Loveliness, Mrs. J. C. Neville, Mme. Gabriel Debrie, and especially W. R. Church, are each very vigorous and stout. The buds on the latter are good. Florence Molyneux with Sir Herbert Kitchener and Mrs. R. Darby made a favourable show. Mrs. H. Weeks is very strong and heavily foliaged, standing but 2½ ft high. The brilliant flowered R. Hooper Pearson is 4½ ft high, grown as triple stemmed plants, and the buds are now developing as finely as could be desired. Dry sunny weather is required in order to perfect the unripened growth.

#### The N.C.S. and the Royal Aquarium.

Writing to "American Gardening," Mr. Richard Dean, secretary of the National Chrysanthemum Society here, says:—"The announced sale of the Royal Aquarium, Westminster, and its probable destruction as a preliminary to building structures for religious purposes will deprive London of the only building in its centre in which a large horticultural exhibition could be held. For twenty years past the National Chrysanthemum Society has held its annual exhibitions therein; a Dahlia show has been held in it for a long time past, and a Sweet Pea exhibition during the past two years. It is central, the position can be readily reached from all points, and there is abundance of space. It is a very serious matter for the National Chrysanthemum Society to be rendered homeless, because beyond the Crystal Palace at Sydenham, which is too far south, and the Alexandra Palace at Muswell Hill, which is too far north, there is no other place commodious enough for the inclusion of a N.S.C. exhibition. The sale has to be ratified by the shareholders of the Royal Aquarium, but that they will assent to the sale of the building there can be no doubt."

## Notes from Gardening Literature.

(Concluded from page 195.)

The heating of glass structures by hot water was agitating the experts of that day (1820-40), and in all the journals or magazines drawings were given of the various systems. To describe these would hardly come under the scope of this paper. One only might be made mention of, viz., heating by hot water troughs, and where dips had to be made syphons were used. Some doubts were expressed as to the effect of too much moisture by that system, but according to the accounts it was not so in practice.

The pruning of fruit trees also caused as much controversy and difference of opinion as it does at the present day. Grape growing had not attained the dimensions of the present day, and in a communication from Mr. James Acorn, gardener to the Earl of Surrey, Worksop Manor, March, 1826, he gives details as to how he is able to maintain a supply of Grapes all the year round. An experienced Grape grower also gives his views of Grape growing in "London's Gardeners' Magazine," in 1833. "The border in front of the vinery should be 30 ft to 40 ft wide (?) and should be formed of loamy soil, sharp sand, and at least a fourth part of well-rotted horse dung. The Vines may be planted on the outside of the front wall, but the stems should be taken through it below the level of the surface. When it is desired to swell the fruit to a large size, the border should be well watered every evening in the swelling season, and covered during the day with litter to prevent evaporation.

"In order to have very late crops of Grapes the house should be kept dry by giving air every fine day, and supplying no more

fire heat during winter than is barely sufficient to keep out frost. If the house is in the neighbourhood of much coal smoke, the laps between the panes should be puttied, and the putty such as will not crack, which is effected by putting 1 lb of white lead to every 10 lb of putty, and instead of using common linseed oil, which dries and cracks, use sweet oil."

As putty is mentioned, the following use for the old putty is worth noticing. A correspondent wrote:—"Two years ago I had a heap accidentally placed on a piece of turf, it was afterwards cleared off and burnt. Since that time the grass in that place has required to be mown thrice to once in other parts, and the grass is of a much better quality. I intend to apply some to plants in pots, as I think it contains nourishment for plants in the absence of watering."

There were scientific men in those days, and Joseph Hayward, of Weymouth, author of "The Science of Horticulture," gives a recipe to assist fruit trees to set their blossom. He says the Peach, Apricot, Plum, and Apple are well furnished with blossoms, and often fail in the setting and fall off. These failures he had proved to be the effect of unwholesome food, and he advised the following:—"Just as the blossom is beginning to expand, take a Potato fork and make holes, 18 in apart, as far as the roots extend, by pressing the fork in, and giving the soil a gentle heave. Then dissolve some nitre in water (1 oz to 3 gal of water), and fill the holes with the solution. No manure must be given, but if after stoning of the fruit the tree should be unequal to sustaining its crop, the following preparation may be given in the same manner as the nitre. To 1 gal of blood add 1 gal of water and 1 oz of potash; stir the mixture well, and let it stand for a week. Now pour off the solution, and mix 1 gal of this liquid with 4 gals of water, and give it to the trees as above." This discovery he considered of great value.

In the earlier part of these notes I mentioned that in visiting the various gardens in England and Scotland, the writers freely expressed their opinions as to the conditions of them. I will conclude my paper by two or three quotations showing their remarks.

Loudon speaks of Drumlanrig in the highest praise, but finds fault with the attempt to make a carriage drive up a steep acclivity in front of the house, and suggests that they should have commenced the road two or three miles to the right or left and made an easier ascent. Whether that was carried out I cannot say.

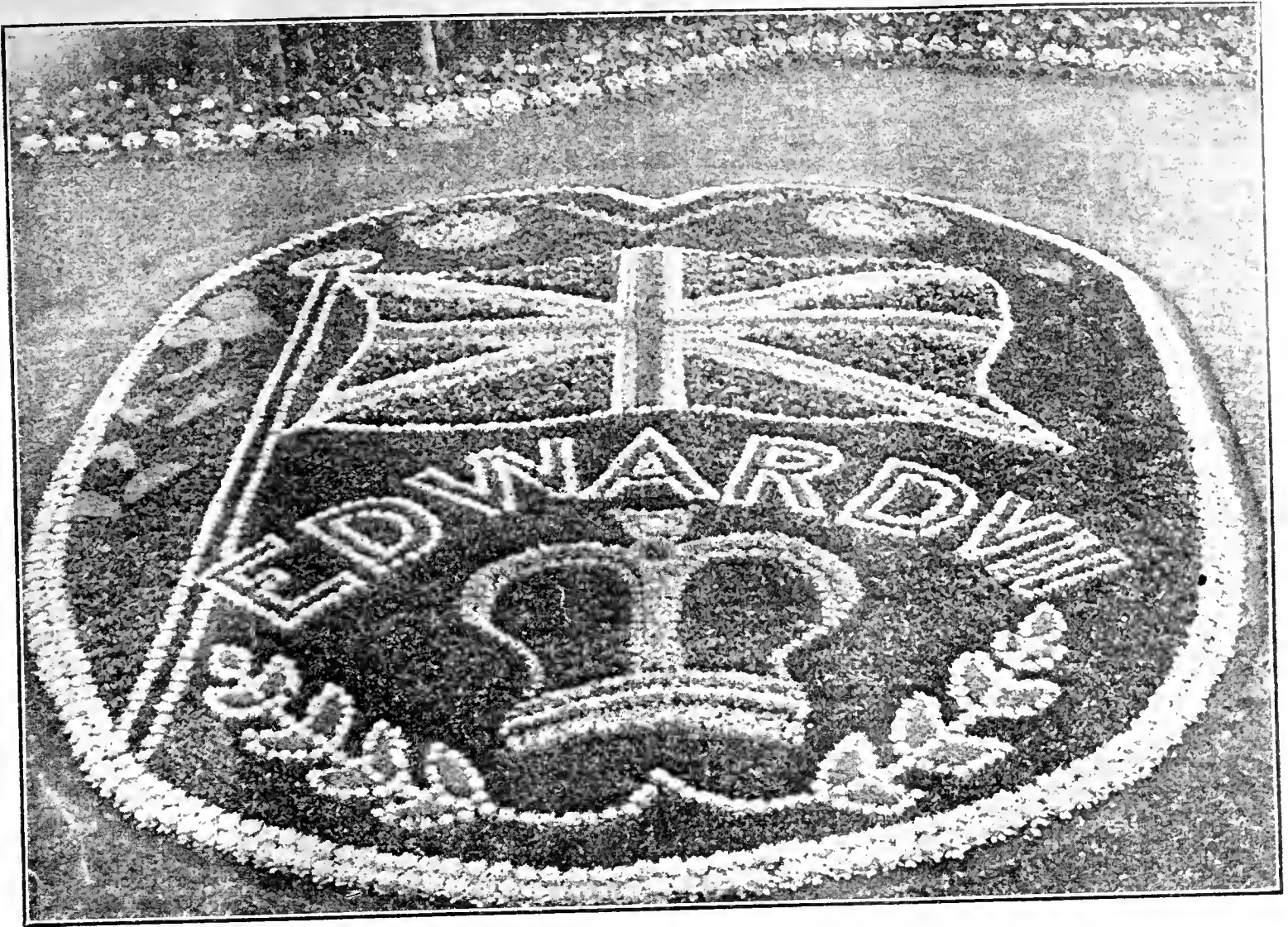
At Caprington Castle, he says: "We were sorry to find that the gardener had recently had his cow taken from him, and we saw the carpenters at work fitting up his cow-house as a fruit-room. What a reward for a faithful servant of twenty-five years' standing!"

"At Williamsfield we regretted to see the park spoiled by 'dotting.' But perhaps it is not yet too late, and if Mr. Cooper, the gardener, a most willing and excellent man, will send us a correct plan of the trees and other objects, as they now stand, we will return it to him gratis, with corrections." [Loudon, be it remembered, was a renowned landscape gardener, and doubtless acted in writing thus quite according to his spontaneous dictates, knowing right from wrong in the principles of his calling.—Ed.]

"At Dalscairth we were surprised to find some green painted iron bridges, an artificial ruin, and other things, belonging, as we thought, exclusively to the Cockney School."

Coming to England, a Mr. Saunders writes rather disparagingly of Trafalgar House (Earl Nelson's seat). He says: "I am persuaded that a few bold strokes from a masterly genius would go far to raise this place to no mean station among its compeers. The place was in tolerable keeping, considering the little assistance that was allowed to the gardener."

Loudon, writing of a tour through parts of Middlesex, Berkshire, Oxford, Wilts, Dorset, Hants, Sussex, and Kent, says: "With respect to gardens and country seats, we may say that, on the whole, we never saw them in a state of worse keeping. The more extensive the gardens the worse they are kept. We scarcely recollect above one or two noblemen's places highly kept. The noblest place in Britain, perhaps in Europe, Blenheim, is going rapidly to decay." In a footnote Loudon added: "Let not this view of decay of noblemen's gardens induce gardeners in want of places to despair. Every gardener who has seen much service knows that a situation under a rich tradesman, merchant, or small landed proprietor is productive of far more comfort to him than one under a nobleman, where so many intermediate persons come between him and his employer that he is at all times liable to misrepresentation, and to be discharged without even an opportunity of explanation. As far as we have observed, the pay given to their head gardeners by men who are themselves in business is as great as, in many instances greater, than that given by noblemen. As the country goes on improving the small places will greatly increase, and with them a taste for gardening and situations for first-rate gardeners."—J. B. S.



Carpet Bed in Grove Park, Weston-super-Mare.

### Carpet Bedding in Grove Park, Weston-super-Mare.

It is not so many years since carpet bedding was in great fashion, both in private and public gardens. Times and custom change, and this once forward style of planting has become almost a lost art. There is no doubt about the popularity maintained by its adoption in public parks and gardens, and it lends itself so well to loyal devices such as that called so universally forth in this Coronation year. Mr. T. B. Mills, the superintendent of the Grove Park gardens, Weston-super-Mare, has on many previous occasions given ocular proof of his skill as a carpet-bedder; but this year he has excelled himself both in style and character, as the illustration of one of his beds on this page shows. Though his glass accommodation is so limited, he contrives to provide some 15,000 plants, hardy and tender, for this phase of garden work. This large heart-shaped bed is in itself a triumph of forethought and execution, 6,000 plants, all varying in colour, being used in this alone. The design is most intricate, a crown, an unfurled Union Jack, a Rose, Shamrock, Thistle, and Laurel-leaf all being worked out in well defined lines, and in bold letters formed of *Alternanthera*, Edward VII. is given due prominence. In other beds, of which there are several, devices such as stars, Prince of Wales plumes, &c., are worked out. Then there are companion beds with "E. R." and "A. R., the beloved," underneath. These are of Apple shape outline. Though carpet bedding is given the most prominent place, the freer style of planting fills ribbon borders and other beds, and all are kept scrupulously neat and trim. The abundant tree growth which abounds in this secluded spot makes it a pleasant resort for the use of the thousands of visitors and residents of this much frequented watering-place, and it also affords a beautiful foil to the flowers so well planted and tended. The colours of the varied *Alternantheras* were wonderfully fine, despite the cold and sunless season, and these served so well to define the lines and characters of the whole design. Needless to say, Mr. Mills receives many encomiums on the high merit of his work from admiring visitors, and it is scarcely necessary to add these compliments are thoroughly and honestly deserved.

—W. S.

### Some Impressions from Fruit Land.

Slowly our Coronation summer is wearing itself away. From the beginning it has not been an ideal one, and gardeners, along with the rest of their fellows, have indulged in many little grumbles. We cannot complain of long weeks of drought and continual burning sunshine, for Old Sol has been very shy with us so far. Frosts, too, have checked the ripening of Tomatoes outdoors and ruined the prospects of outdoor Cucumbers. The vigour of full growth seems to have gone off in the garden, and that air of what I may venture to call untidiness, which generally prevails as autumn approaches, is daily becoming more apparent. The timetable tells the cyclist that he must not go out without his lamp if he intends a long evening ride, and as the twilight fades into gloom and the mist gathers up over the corn-fields, where standing shocks now take the place of a rippling sea of ears, there is a something in the air which tells plainly that the summer is nearing its end.

Writing from a county in which the fruit industry is of prime importance, and the fruit topic is one of general conversation, one may be forgiven for retrospectively a little at this season. Like the links in a chain, the various fruit crops come in and are dealt with one by one, and, in passing, the growers have to reckon with them individually in the profit and loss account before making the collective summing up when the season is finally brought to a close. You may take the fruit harvest of the year in the light of a stage, and over some important scenes the curtain has already fallen.

#### The Strawberry Fields

are no longer scenes of picking activity, for the harvest is over. The plantations present a bedraggled appearance, and there is little to remind you of the traffic of a few weeks ago except a few stray empty baskets and a litter of paper in the corner where the packing was done. The Strawberry retrospect is not a pleasant one, and from beginning to end there seemed to be nothing but disappointments. What a fair prospect it was at first when the early blooms shone forth and growers saw visions of fancy Coronation prices from the early fruits! But it was not to be. One



killing frost sent shattered hopes crumbling to the dust, and the daily papers had big headlines telling of the failure of the Strawberry crop. But it did not fail, as growers realised later on.

The later fruits developed into heavy crops, which all came in at once, and every Strawberry growing district seemed to do its utmost to glut the central markets. The end was accomplished, because the growers were powerless to avoid it, and here a second and greater disappointment presented itself. You cannot hold back ripe Strawberries to sell when the market is eased, and they had to go. Prices fell in consequence, and many a luckless grower found himself, after paying the expenses of picking, transit, and commission, without a cent for himself. It is easy enough to prate about the rich mine of profit offered in fruit culture, but these instances teach one that it is not all honey, and now the very mention of Strawberries brings a look of gloom to the faces of many Kentish growers.

#### Gooseberries.

The frost that spoiled the chances of early Strawberries was also responsible for a severe thinning of the Gooseberries. So severe, in fact, in places that I heard of some growers bemoaning the loss of hundreds of pounds; but what proved to be such a calamity to some turned out to be a blessing in disguise to many others. A portion of the crop fell, but there was plenty left, and Gooseberries have not sold better or steadier for years. They have cost a little more to pick, but the returns have more than recompensed for this, and Gooseberries, which of late years have been looked upon as a poor-paying crop, have saved their reputation. The frost which lessened the supply also eased the bushes of their burdens to some extent, with the result that the fruit grew out larger than would have been the case had the original quantity remained.

#### Black and Red Currants.

In discussing fruit crops in the South, failure must be written opposite Black Currants. This highly profitable fruit has had a bad time of it this year.

The dreaded budmite pursues its work of destruction and baffles all attempts at eradication, and then the frost upset the calculations of growers who were looking forward to something of a crop in spite of the above pest. Between the two evils Black Currants have been very scarce, and those growers who were fortunate enough to have any have had good reason to congratulate themselves. It is reported, by the way, that the new Black Currant, Boskoop Giant, is proof against budmite. Let it be hoped that such is the case, but the same was said of Champion when it first came out. Experience, however, has proved the contrary.

Speaking of Red Currants, these are not counted amongst the really important fruit crops, and in spite of early losses they have borne well. I was walking through a plantation the other day in which I observed a number of standard Currants growing round the outskirts. On the upper parts of the stems and on the heads of these were long bunches of the finest Currants I have ever seen, and this method commends itself to anyone who wishes to make the most of ground and produce fine crops of fruit.

#### Cherries.

The time has gone when pessimistic heads were shaken over the prospects of the all-important Cherry crop. There were good reasons for the head-shaking, for though the blooming time was promising, the same frost that had so much to do with settling the destiny of other fruit crops somewhat upset the calculations of the Cherry growers. But the story of the Cherry crop is far from being a dismal one. The fruits were thinned everywhere, and the trees in some orchards bore nothing, but when the auction sales were held, prior to the picking, record prices were made, and the fruit in some good orchards fetched double what it did last year when the trees were far more heavily laden. And in regard to Cherries the fruitmen are on good terms with the salesmen because the returns came back recording good prices, which have allowed for the extra cost of picking and then left a nice balance in favour of the growers.

In spite of the fact that the war is over and work is said to be somewhat scarce in the country, the labour question has been a serious one, and growers have had to employ a class of workers that they would prefer to see on the outside of the plantations if good native material had been

forthcoming. One can hardly understand the dearth of agricultural labour in Kent, for wages are fairly good, cottages are cheap, and apart from the menfolk, both women and children can earn continually from the time fruit picking begins till the Hop season is over. The bulk of the Cherry traffic is now over with the exception of the Morellos, which in most parts are only a thin crop this year, and will not take much disposing of.

#### Plums are Scarce.

Last year about this time the common topic was about the glut of Plums and the chances of disposing of them, but now the scarcity of this stone fruit is the theme. Here and there you see trees fairly well laden, and some of the early varieties, such as Early Rivers and others, have found their way into the market; but, as a rule, Plums and Damsons are a thin crop, and some growers are having to be contented with nothing. This is not surprising considering the way in which the trees have been burdened in the past few seasons, though one regrets these extremes and wishes that moderate crops were more the order of things. Though fruit is scarce, blight is plentiful, and to this scourge may be traced to some extent the lightness of crops. Insect pests seem to increase in spite of the many insecticides now on the market and the modern methods of applying them, but then this may be traced to the fact that for every grower who attempts to keep down the foes half a dozen do not, and eradication is impossible unless there be a combined operation.

#### A Heavy Nut Crop.

Never for many years have Kentish growers had such good reasons for congratulating themselves on the nut crop as this season. On the stony hillsides where Kent Cobs and Filberts are cultivated, the bushes are heavily laden, and some persons who have had experience enough to offer an opinion say that the nut crop will be a record one. In a measure they are gratified, but there is also the lurking fear that the plenty will mean low prices, and that the crop will not be so profitable as it would be if it were only half as heavy. Nuts do not grow free from pests, and the foliage in most plantations is honeycombed by the ravages of hungry maggots. Some growers make war against them by spreading tarred sheets under the trees and shaking the maggots on to them, but so long as they do not destroy the precious nuts the majority are content to let the marauders have their feed of foliage, irrespective of the damage done to the trees.

#### The Harvest of Apples.

As I write we are on the fringe of the Apple harvest. The early dessert varieties, such as Mr. Gladstone, Irish Peach, Quarrendens, and Juneatings are ripe, and trade is being done amongst the Keswicks, Suffields, and early culinary sorts. One can only describe the Kentish Apple crop as being "patchy." By this I do not mean to say that it is poor, for it leans rather in the other direction; but Apples are not plentiful everywhere. Here you may see orchards laden, there a moderate crop, and in another instance very few indeed, but when it comes to the settling up, I think Apples will come out fairly well.

There was a grand promise, and everyone spoke of heavy crops, but they were reckoning without the season and the aphids, and the codlin moth and other ills that Apple life is heir to. Pests have played their usual havoc, and what we call "windfalls," but what are really grub-bored specimens, are already plentiful under the trees. The codlin moth caterpillar is the bane of Apple growers, but it is not altogether a curse, because it does the necessary thinning that growers cannot find it in their hearts to do, and the fruits which remain grow finer in consequence. Generally speaking, I think there are enough late Apples to keep us going well into the winter, but storage, unfortunately, is a point which many growers do not consider much.

The great idea seems to be to get the Apples off the trees and into the market with as little delay as possible, presumably in order that the coast shall be clear when the time comes for the foreign imports to arrive. You see we are very considerate in the way we treat our competitors.

#### Pears are Scanty.

I am afraid Pears will not tell heavily on the profit side of the fruit account this year. "Williams" I hear, are not generally plentiful, and many of these are grown in Kent. Pitmaston Duchess is another popular market variety, and

there are many others of more or less account. Considering the area, however, and the attention paid to other fruits, Pears, particularly the high class varieties, do not figure so conspicuously in the country as one would naturally expect, though in some parts their value is appreciated.

But I am afraid my impressions have occupied too much space already, so they shall be closed here. In their make-up they are both retrospective and prospective, and on the completion of the fruit harvest let us hope that the successes will outweigh the failures and show a substantial balance on the profit side of market growers' ledgers.—G. H. H.

## A Nurseryman's Visit to Canada.

Mr. Joseph Cheal, of Crawley, has had a trip to the United States of America and Canada. Of his visit, a report appears in the "Sussex and Surrey Courier," from which we learn that he saw some of the larger American parks in New York City and Brooklyn; he also visited Philadelphia. At Madison, New Jersey, he found one of his late pupils in command of an extensive private garden there, and other English gardeners superintend numerous gardens throughout the States. "From Madison," he says, "I then went on by boat up the Hudson River as far as Albany, a most lovely sail over picturesque and historical country. Passing on by rail from there to the Falls, the journey was continued by steamer across Lake Ontario to Toronto. Here I stayed for a week, and after this several days were spent in going up to the backwoods to see a young man who went out to settle there about two years since. This was nearly 300 miles north of Toronto; part of the distance was covered by rail to Huntsville, then a series of lakes had to be traversed by small boats, with necks of land between, and the first night had to be spent at a little wooden hotel at the head of the Lake of Bays, a picturesque lake about twenty miles long, a perfect network of promontories, bays, and islands, every piece of land, and even rocks, being covered with Pines and trees. The journey was pursued in the morning for several miles by lumber waggon through a forest which had recently been swept by fire, the dead and decaying trees presenting a most weird appearance, the last four miles being accomplished on foot, following a track through the primeval forest until a log hut was reached at one end of Oxtongue Lake. The settler was at home and kindly rowed me in his little boat to the other end of the lake to the hut and clearing of my friend. Here I had a little experience of real backwoods life, and a rough and lonely life it must be. This is a most lovely spot, but I formed a very poor opinion of the land for cultivation. There are millions of acres of rich prairie land yet unappropriated, but I should look upon this district as only a sporting country. Deer of different kinds abound in the forest, as also wolves and bears, and the lakes are full of fish. I succeeded in taking some interesting photos of the district.

"Afterwards I returned to Toronto, and several days were spent in visiting the principal fruit districts of Ontario. This is a strip of land about a mile wide and extending for over twenty miles round the shores of the lake, backed up and sheltered by a high cliff behind. I was surprised to see the thousands of acres of flourishing orchards and vineyards of this district, Peaches growing in the same way as our Apple orchards, and Grapes trained on wires, and these orchards are most carefully cultivated and kept remarkably clear from weeds and blights. A Government inspector of fruit accompanied me through these farms, and from him I gained much information. I then passed on to Ottawa, a beautiful and flourishing city. An introduction to Professor Robertson, the Commissioner for Agriculture, led to an interesting conversation about their experimental work, and I spent a most profitable day with Dr. Saunders, the able director of the experimental farms and gardens of the Dominion. I was much interested in their different systems of packing, storing and freightage of fruit, and an introduction to one of the directors of the Canadian Pacific Railway, Sir Sanford Flemming, led to an interesting conversation with him in travelling together from Ottawa to Montreal. I gained from him much information as to the progress and prospects of the Dominion. He said that immigration has been larger this season than any year previously, and that from the States they had had an influx of 24,000, and that their company had sold one million acres of land this year, and on asking him how much they had left, he said another twenty-seven million acres. And now as they push their branch lines right and left of the trunk, purchasers are found for the land adjoining. On all hands there are evidences of prosperity and progress. I had thought the long, cold winters almost an insuperable barrier, but the Canadians assure me it is not so bad as we imagine, and that the snow on land and ice on the lakes and rivers open up roads for hauling which are impassable in summer, and though the frosts are, very severe, the

wood of the fruit trees is so well ripened that it escapes uninjured; and the air is so dry that it is not unpleasant to human beings. The return journey was made from Montreal by the Allan line, and the steam down the St. Lawrence past Quebec is a very pleasant one, and a bit exciting in shooting the Lachine rapids above Montreal. We could not take the northern route, as the straits were blocked with icebergs, and in passing out to the south of Newfoundland we saw floe ice breaking up on the rocky coast."

## Rambles in Switzerland.

(Concluded from page 216.)

One of the peculiarities of alpine districts is the inability of the human eye to appreciate the vastness of the elevations. I was at the foot of the Jungfrau, which rises to the height of 12,852ft, yet it certainly did not seem to me so much higher than Snowdon, which is only 3,567ft. One of the most striking evidences of great elevation is noted by Mr. Macmillan, who observes that on Mont St. Bernard, at an elevation of 8,000ft, "water boils at about 187deg Fahr., or 25deg sooner than the normal point; and in consequence of this it takes five hours to cook a piece of meat which would have taken only three hours to get ready down in the valleys." Though the total of the elevation is so difficult to appreciate, the steepness of their sides is not at all doubtful, especially to pedestrians. Yet on these slopes, which no Englishman could mow, hay is made; but as no vehicle could rest upon them, the hay is carried home in bundles, enclosed in nets on the backs of men and women. It is stored under cover, for, in this land of universal pasturage, such winter fodder is more valuable than the scanty grain crop. Pursuing any occupation under difficulties, invariably leads to assistant inventions which would never be suggested were the occupation untrammelled by obstacles. One instance I observed where watering was needed on a hill slope, and the crops were in drills. A narrow four-wheeled dray had to be employed for conveying the water. One large vessel for holding the water would have been unmanageable, so there were in the waggon three casks connected by leather pipes, and the water was delivered to the crop through a tap and hose attached to the end head of the last cask.

Wood is the universal fuel, and it is chiefly of the Beech, which usually clothes the base of each mountain, as the Abies excelsa, or Norway Spruce Fir, exclusively occupies its higher portions.

The cottage gardens are small, but well stocked with the vegetables most common in England. The only crop unusual with us, but almost universal in the Swiss gardens, is the White Beet. It also is peculiar to see large patches of Dandelion cultivated in corners of fields. It is used for salading.

Honey is a perennial occupant of the breakfast table, and is of excellent quality and flavour. The bee hives, all on the old pit-and-brimstone system, are ranged on a shelf against the side of the house, about 6ft from the ground. I saw none otherwise placed.

The employment of the dwarf Palms as room plants has often been recommended in your pages. In Switzerland and other parts of continental Europe no such recommendation is needed, for they are so employed very generally. Even on the table d'hôte of every respectable hotel they are common. The *Corypha australis* is the species usually employed.

I have now turned over the last page of my note-book, and its first line is inscribed "Lausanne—Vevay." Indifferent though they are, yet here are produced some of the best of the bad Swiss wines. Vevay is the vineyard district of the cantons. Here is "L'Abbaye de Vignerons," or Guild of Vine-cultivators; and its motto, "Pray and Labour," is an admonition applicable to all the affairs of life. This guild bestows medals and other marks of honour upon the most skilful Vine-cultivators. At intervals of about fifteen years, also, a public festival is held, in which the most successful of the vineyard keepers is crowned, and borne in a procession, accompanied by various characters associated with the history of the Vine—such as Bacchus, Noah, Silenus, Pomona, the spies who returned from Canaan bearing Grapes, and many others. On this occasion, too, the prettiest and most worthy maiden of the district is dowered and married to her accepted lover.—W. J.



# NOTES & NOTICES

## Good Price for Kentish Fruit.

On September 2 Kentish Plums made exceedingly good prices, the better sorts realising as much as 10s. per bushel compared with 6s., the average of former seasons. Apples also sold freely at from 5s. to 6s. per bushel, an advance of over 2s. It is many years since there has been so good a fruit season experienced in Kent.—(*"Morning Post."*)

## United Horticultural Benefit and Provident Society.

The monthly committee meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, W.C., on Monday evening last. Mr. C. H. Curtis presided. Five new members were elected, making seventy this year to date. Four members were reported on the Sick Fund. The amount of sick pay for the month was £12 12s. This society will hold its annual dinner in the Venetian Chamber, at the Holborn Restaurant, on Tuesday, October 7 next, at 6.30 p.m. The chair will be taken by Arthur W. Sutton, Esq., F.L.S., V.M.H.

## Our Bulb Number.

The bulb number, of which particulars are published on one of the advertisement pages in the present number, will appear next week (September 18). The issue will contain over twenty illustrations, with special articles. These, we trust, will be read with interest, and stimulate, perhaps, a fuller appreciation than ever with regard to the beautiful vernal flowers from the various bulbous plants.

## Past and Present.

Some time ago I wrote on the bothy question in the Journal, and gave a description of the bothy at Park Place, Henley-on-Thames, and of the pastimes provided for the young men there. I am certain many readers will look at the heading of this article and wonder what it stands for, but to those men who have lived at Park Place it is familiar. Thursday, August 21, was the meeting of past and present gardeners at the above place, the charming residence of Mrs. Noble, who not only takes a great interest in her beautiful gardens but also in the men, who have served under Mr. G. Stanton, the highly respected and well-known gardener there. It is, indeed, a meeting that must bring joy to him, to welcome back for the day the many old faces that have worked under him. Some of these are now holding high positions in various parts of the United Kingdom. The day proved to be one of the best we have had for some time, and from early in the morning till late in the afternoon old Park Place men streamed in. Three large tents had been erected for the occasion, which were beautifully decorated with national coloured flags, not forgetting the tables, which were done with choice plants by Mr. T. Powell. At luncheon, Leonard Noble, Esq., president of the cricket and football club, proposed the health of His Majesty King Edward VII. Mr. Stanton spoke of the great pleasure it gave him to see so many of his old men sitting around, and of the kindness of Mrs. Noble and family in welcoming them so heartily. A cricket match was played between the past and present members, and was won by the "past" team by a narrow margin of seven runs—a very good performance considering that some of the players had not touched a bat since the previous year. The gardens and grounds were thrown open, and those who did not care to watch the cricket could stroll round, and no doubt many would have a chat about times now gone. Just before tea all the members were brought together to be photographed, in which Mrs. Noble and family were taken sitting in front of the group. At 8.30 p.m. a smoking concert was held in the large room adjoining the bothy, which is used for gardeners' meetings, &c. I think many other large employers might follow the example set by Mrs. Noble, but I am afraid few will do so. It was no wonder that the cheers for her rent the air, and the desire of everyone was: "May she be spared for years to come." Mr. J. Powell, the energetic foreman at Park Place, and hon. secretary for the cricket and football, is to be congratulated on the manner in which he had arranged the cricket proceedings.—J. BOTLEY.

## Register of Nurseries, &c.

Messrs. Protheroe and Morris's Register of nurseries, market gardens, farms, florists' seed businesses, and partnerships, to be let or sold, for September, 1902, has been issued. It can be had from the firm at 67 and 68, Cheapside, E.C.

## Appointment.

Mr. George Goodall, for some time foreman at Heslington Hall, York, has been appointed by Lord Deramore, to succeed the late Mr. James Hornby as head gardener. Mr. Hornby had been in the position thirty-two years, and died in harness on August 31, and was interred at the parish church, September 3.—H. J. C.

## Forestry and Fruit Growing in South Africa.

Recent reports from the Government forest nursery which has been laid out near Thaba Nchu, show that surprising progress has been made. Over 100,000 seedling trees, mainly Eucalyptus and Pine, are now ready for transplantation. Experiments have also been made in the cultivation of Oak trees, of which eight acres have been planted, and the Wattle area under cultivation is being continually extended. The construction of dams and water furrows is proceeding. It is intended to establish plantations generally, and wherever the Government acquires land a portion of it will be preserved for forestry.

## The Martin White Essay Prize.

It will be remembered that Martin White, Esq., of Balruddery, Dundee, offered substantial money prizes for an essay on the decorative uses of flowers and their preservation, through the Council of the Royal Caledonian Horticultural Society.

For this prize there were no fewer than sixteen competitors, several of the essays being of considerable merit, and some of them needlessly lengthy. Though little in them was new or original, the prize essays are said by the judges to contain many valuable hints useful to both gardeners and those who do their own decorations. The prizes were awarded as follows:—First prize "Captain Cuttle," James Ewing, gardener, Castle Menzies, Aberfeldy; second, "Confido," Miss Hamilton Boyd, 56, Palmerston Place, Edinburgh; third, "Nemo Solus Sapit," John Wright, Hopton Hall Gardens, Wirksworth, Derbyshire. Highly commended: "Endeavour to Please," H. F. Smale, The Gardens, Wortley Hall, Sheffield; "Experimenter," Herbert Cowley, East Lodge, St. Mary's Home, Wantage, Berks. Commended: "Courage," J. H. Cumming, The Gardens, Grantully Castle, Aberfeldy. "Knowledge is Power," William Boyd, The Gardens, Belleisle, Ayr; "Clematis," John Botley, The Gardens, Scarlet's Park, Twyford, Berks.

## Echoes from Hamilton, N.B.

A storm of unusual severity, for September, passed over this district on Wednesday. As the gale blew with remorseless vigour through the leafy boughs of garden and forest trees, carrying devastation in its course, the destructive storm of approximate date, twenty centuries ago, and which dealt so much havoc to the Roman fleet in the neighbourhood of Richborough Castle, somehow forced its existence on our memory—why, we are unable to offer any explanation unless because storms of like severity are by no means common at that particular date. If the occurrence were ten or more days later, the wonderment would not be so great, as then all look out for the traditionary effects of Sol's passage across "the line." Anyhow, the effects of Wednesday's storm have been disastrous to garden and farm produce, not only in the district but over a great part of the country. And the fact that the gale blew in the forenoon from the S.E. and in the afternoon from the West and S.W., made its effects felt more seriously. Peas, Cauliflowers, and such easily injured produce were, of course, by the determined tactics of the elements, on this occasion, literally blown out of the soil. The orchards of the Clyde valley, we are informed, have suffered very severely; in many cases the trees have been wholly denuded of their fruit. Forest trees have, on account of the weighty nature of their leafage, sustained greater injury than they would in winter. Consequently, drives and avenues in gentlemen's policies were littered with fallen branches, twigs, and leaves. Flower borders and beds will not again recover their former gaiety. It is still more serious to see the Wheat and corn fields lying twisted and rain beaten, prostrate on the ground. The following day (Thursday) accentuated the damage of Wednesday by an almost continuous down-pour of rain. The elements are not yet very settled in appearance.—D. C.

**Royal Horticultural Society.**

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, September 23, in the Drill Hall, Buckingham Gate, Westminster, 1.5 p.m. A lecture on "Some Lesser Known Japanese Trees and Shrubs"—specimens of which will be exhibited—will be given by Mr. James H. Veitch, F.R.H.S., at three o'clock. At a general meeting of the Royal Horticultural Society, held on Tuesday, September 2, thirteen new Fellows were elected, making a total of 898 elected since the beginning of the present year.

**A Catalogue with Illustrations only.**

Messrs. Vilmorin-Andrieux and Co's "Album de Clichés" presents a host of stereotyped plates of plants, flowers, and vegetables, with quotations in French and English money values, beneath. The names of the subjects are supplied as well, but otherwise there is no text. As a trade guide, it must be very useful, but retail prices do not appear. Potatoes, Cabbages, Carrots, Oats, annual flowering plants, &c., are included in this, the second edition, supplement August 6, 1902. The firm's address is 4, Quai de la Mégisserie, Paris.

**The Gardens, Ragley Hall.**

On Thursday, September 4, by the kindness of The Marquis of Hertford, the beautiful gardens and pleasure grounds at Ragley Hall, were thrown open to the general public, and an opportunity was again given the visitors to contribute to the funds of The Gardeners' Royal Benevolent Institution. The inhabitants of Alcester and neighbourhood gladly availed themselves of the opportunity to inspect the thousands of bedding plants, specimen Coniferae, &c. Great interest was manifested in the pyramids of Plumbago, Zonal, and Ivy-leaved Pelargoniums, of 6ft in height. A novel and attractive feature of the carpet beds was that of the designs reminding one of this eventful Coronation year, crowns, coronets, and stars. Warm thanks were expressed for the kindness of the Marquis of Hertford in granting the privilege of a special day on behalf of the G.R.B.I. Thanks were also extended to Mr. R. D. Christie, the head gardener, for his efforts to further the pleasures of the visitors. A good amount was collected.

**Horticulture at University College, Reading.**

University College, Reading, was founded in June, 1892, at the instance of the House of Christ Church, Oxford. It was incorporated in 1896. By authority of decrees of the University of Oxford, a joint committee, consisting of representatives of the Oxford Delegacy for the extension of teaching, of the University College, Reading, and of the Royal Agricultural Society, supervises the horticultural instruction and examinations, and awards certificates. The college consists of departments of letters and science, agriculture and horticulture, music, and the fine arts, and provides teaching for about 1,000 day and evening students. In addition to lecture and class-rooms it contains zoological, botanical, chemical, physical, and bacteriological laboratories, art studios, students' library, and common rooms, and there is a garden for horticultural instruction. The college advises in the adjoining counties with regard to insect pests, plant diseases, the identification of plants, and the manuring of soils. With regard to the Department of Horticulture, the eleventh session (1902-1903) commences on Thursday, October 2. The horticultural course extends over forty weeks, which is ten weeks longer than the ordinary college session. The courses of study are arranged to meet the needs of those young men who are preparing for the Oxford and Reading Joint Committee's certificate in horticulture; the Royal Horticultural Society's examinations; or who intend to be instructors in horticulture to County Councils. Further, those who may desire (as the prospectus puts it) "to manage their own gardens," may here receive some necessary useful training. Practical instruction is given in the College garden, to the superintendence of which Mr. W. H. Patterson, an able gentleman of varied training, has lately been appointed. Mr. Patterson is also the lecturer in horticulture. The director of this department of the College is Frederick Keeble, M.A. (Caius College, Cambridge), who is the exponent of botany to the students. The subjects of the curriculum are: Horticulture, chemistry, botany, entomology, soils and manures, bacteriology, bee-keeping, book-keeping, and meteorology. Those who are desirous of further particulars should communicate with Mr. Francis H. Wright.

**Notes on Hollyhocks.**

Few of our garden flowers have undergone such vicissitudes of popularity as the Hollyhock. It is really not so very many years ago that there existed collections of choice varieties in many gardens of note throughout the country; while they were treated as florists' flowers by many admirers. Then came the dreaded disease (*Puccinia malvacearum*) that in a few years swept the great majority away, leaving only those with the most robust constitutions. At this period the stately Hollyhock was indeed under a cloud, and remained so for many years; in fact, Mr. Editor, it really has not yet recovered the popularity it once held in our estimation, and for this reason I am penning these notes, in the hope that I may persuade a few more people to take up their cultivation, or at least find room for a few of these stately plants in their gardens. They may do so without fear or trembling, for the Hollyhock of to-day is quite a different being, as it were, when compared with the weaklings of a few decades ago. The modern strain have good, vigorous constitutions, and escape, more or less, the attacks of the fungus. This desirable fact has been brought about within the last few years by a few specialists who have raised seedlings annually, and by cross fertilisation have achieved some remarkable results without destroying the vigour of the plants. So much so, that at the present day we have varieties and colours that are worthy of a place in every garden, whether on the flower borders, or in shrubberies, or in any other suitable position.

Personally, I am no advocate for named varieties, which have to be propagated by cuttings or division, it being a well-known fact that seedlings come pretty true to colour and character, and in such plants we get the health of the seedling. Good collections can now be obtained giving a wide range of colours, from pure satiny white to cream, pink, rose, red, reddish purple to almost black, the latter being a very deep maroon, so there is a good selection of colours to choose from. While mixed seedlings can be purchased more cheaply, and if obtained from a reliable source they are sure to be good.

I should now like to draw attention to the single forms that were always despised in the days of our fathers; but now that single flowers are so much in vogue we can admire the tall, stately form of a single flowered Hollyhock without being thought to be a "bit of a crank," and, after all, they are lighter in appearance than the double forms. During the past few years they have been very much in evidence in all our suburban districts, and with their varied colours they make a beautiful display, while their hardiness and adaptability to almost any soil make them general favourites wherever they are grown.

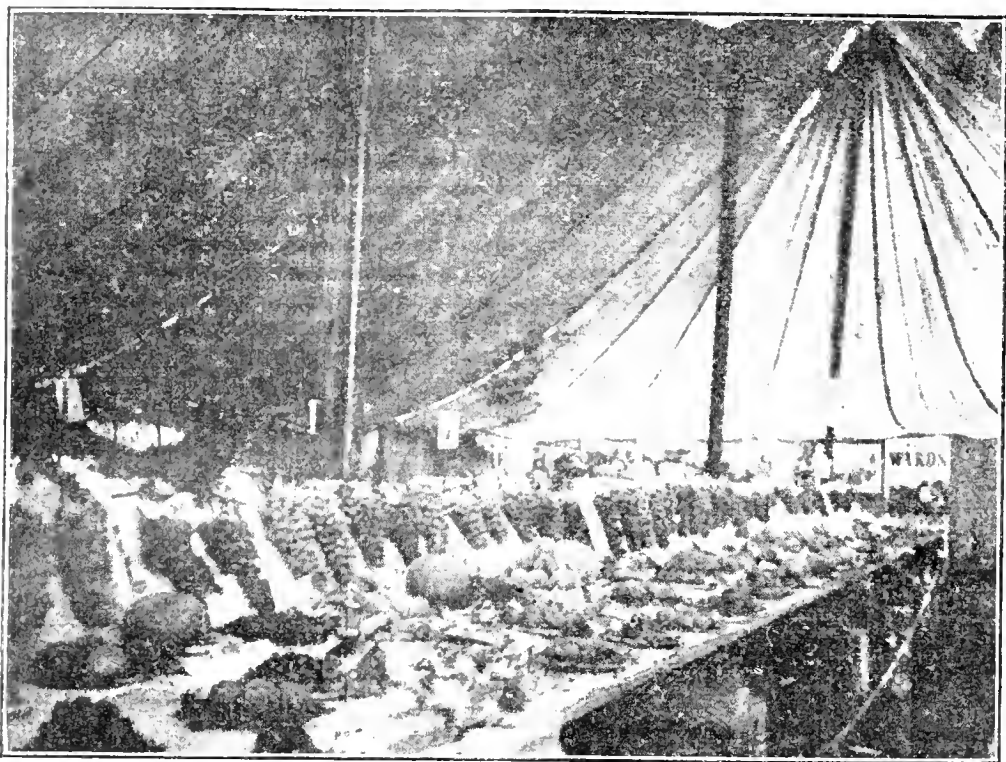
As to cultural details, they are simple in the extreme. If planted in good garden soil they will take care of themselves, for they are so hardy now that the old method of lifting them and wintering them in frames is no longer necessary. If grown without the aid of strong manures or fertilisers, one has little to fear from the fungus. If we desire to keep special colours, it can be accomplished by propagation from cuttings, or division of the stock after flowering. Those who are more ambitious, and desire to improve the already existing forms, can do so by carefully crossing them and raising the seedlings. The first cross will not give the result one requires, but if the seed is again sown from the first cross the desired results are often obtainable. This has been so several times to my knowledge. Reliable strains of seeds can now be obtained cheaply, and if sown in the spring will make fine plants for flowering the following year.—AN OLD CONTRIBUTOR.

**Summer Bedding: Plants and Arrangements.**

(Continued from page 219.)

Another of the sweetest beds in Hyde Park was that where a dark blue *Viola* had been used to carpet the bed, and flesh coloured Carnations were over this. There was no edging, but the contrast had a telling effect. A rectangular bed contained eighty-four evenly grown plants of *Fuchsia Marinka*, each profusely flowered. *Coreopsis tinctoria* and *Nierembergia gracilis* were used to impart further grace, the carpeting being of *Leucophyton Browni*, a grey, trailing, wiry stemmed plant. The edge was of oblique alternate bands of this, and *Alternanthera amabilis*, each





Bath Show: Side View of the Fruit Tent.

"band" being about 2ft in breadth. A simple yet pleasing arrangement was that of *Lilium speciosum* above, and crimson *Celosia pyramidalis* beneath, edged *Alternanthera versicolor*. In another bed the yellow *Celosias* were employed.

*Lantana Drap d'Or* (golden) over blue *Violas* was good. In a round bed were *Lantana delicatissima* over white *Violas*. Crimson *Celosias* were also used, with an edging of *Alternanthera amoena*. The large beds of foliage plants need not be noticed at this time, they having had due reference in past seasons. The above notes complete the review of Hyde Park bedding, but at

#### Ravenscourt Park,

near Chiswick, Mr. Gingell, the superintendent, has also one or two charming arrangements. Such simple beds as those with crimson *Celosia pyramidalis* over *Antennaria tomentosa*, or yellow *Celosias* over *J. B. Riding Viola*, are sweet. A larger bed with bays and angles is entirely filled with *Abutilon Thompsoni*, each a specimen plant, staked, and with large foliage. *Coleus Verschaffelti* and *Koeniga maritima* (outermost), is also very handsome. *Grevillea robusta* over a bed of *Begonia semperflorens* edged with *Euonymus radicans variegata* is noteworthy.

Rather too dull, but novel, is a bed of *Cyperus alternifolius* with blue *Lobelia* beneath, and edged with a golden leaved *Fuchsia*. White *Antirrhinum* below a dark red *Fuchsia*, edged with *Funkia ovata marginata*, commends itself at once. There is much to admire, too, in two small round beds near one of the gates. These are filled with *Begonia semperflorens rosea* and blue *Lobelia* mixed, edged by *Sedum tabulaforme*. Throughout the park there are many beautiful foliage and flowering shrubs, and I know that Mr. Gingell has chosen these with a view to having a continuance of bloom the whole season through. The keeping of Ravenscourt Park is in very capable hands.

#### Hampton Court.

The bedding here is exceedingly beautiful, and executed with care, forethought, knowledge, and good taste. The keeping of the gardens in general is entirely satisfactory. Perhaps in point of merit these notes of the bedding here ought to have been given a prior place, but I am recording my impressions in the order of my visits. Mr. J. A. Gardiner is the superintendent of this historic garden.

I need not attempt to describe the beds, but only name the subjects used in the most effective arrangements as follows:—Mixed *Verbenas*, mostly of crimson colour, with *Abutilon Thompsoni*, and edged with a white variegated Ivy-leaved *Pelargonium*. Carmine flowered *semperflorens Begonias* with white *Koeniga* and Golden Feather *Pyrethrum* intermixed, having erect *Plumbago capensis* (4ft) above, and edged with *G. F. Pyrethrum*. Another had *Fuchsia Scarcity* (red) with *Abutilon Savitzi* mixed, and both 3½ft to 4ft in height. Beneath was *Chlorophytum variegatum* and *Bouvardia corymbosa Humboldtii*, splendidly flowered and choice. The edge was of *Leucophytum Browni* and

small plants of *Pelargonium H. Hieover*. A charming bed—*Leucophytum Browni* (grey) over the surface; *Begonia La Fayette* (crimson) above this; *Arundo Lindleyana* (like "Gardeners' Garters") lending grace, dotted over the bed, and an edge of *Abutilon vexillarium variegatum*, sometimes called *A. megapotanicum*.

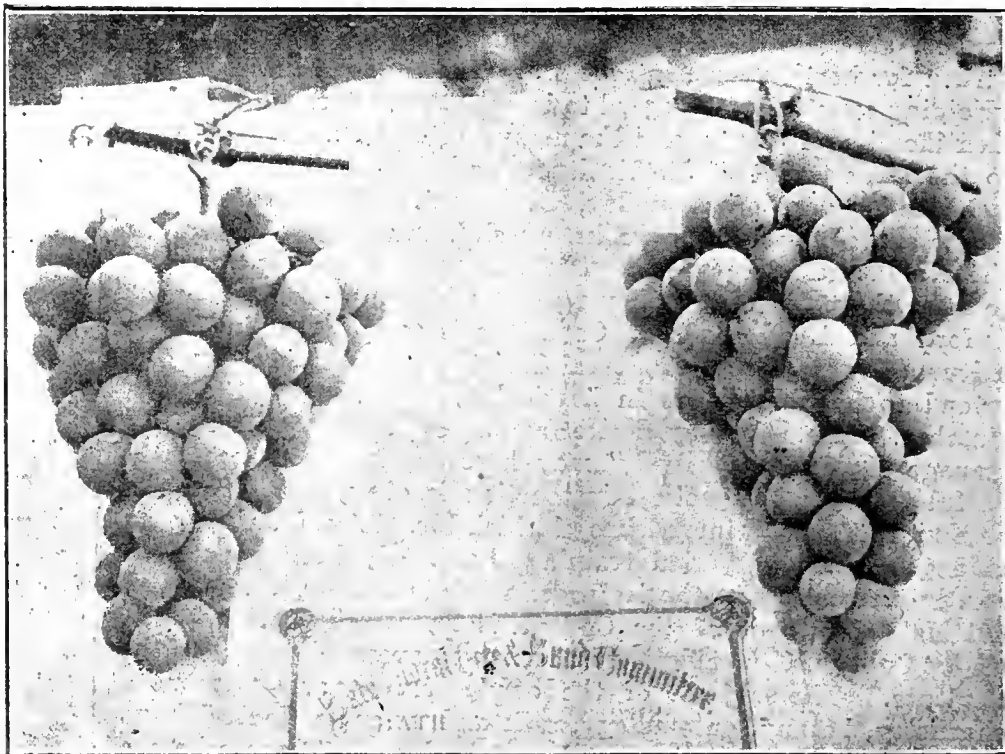
Rich and bright in colour was a round bed of tuberous *Begonias* in named varieties, mostly carmine and crimson flowered. Laing's Rosy Red is a very good sort. *Abutilon Savitzi* was used above, and the edge was of white *Lobelia*. Most telling, too, was the contrast of *Koeniga* (tufted little plants) below and between *Begonia weltoniensis*, grace being imparted by *Eulalia gracillima*, and an edge of variegated Ivy-leaved *Pelargonium*. Again, take *Begonia ascotensis* in conjunction with *Centaurea candidissima*, and having a carpeting of *Mesembryanthemum cordifolium variegatum* undermost. Decidedly attractive was *Pelargonium Crystal Palace Gem* (golden foliage) and starred over it the flowers of a *Viola Bluebell*, standard plants of *A. Thompsoni* harmonising with the *Pelargonium*. The edge was *Lady Plymouth Pelargonium*.

With *Pelargonium Crystal Palace Gem* as an edging, and *P. Flower of Spring* in the centre, *Viola J. B. Riding* peeping up all over among the foliage, and standards of *A. Thompsoni*, another charming bed was presented.

In a round bed were noted *Fuchsia Mrs. Marshall* (or one like it), with *Begonia weltoniensis* under, with *Viola Countess of Kintore*, the edge being *Euonymus radicans variegata*. Mixed crimson flowered tuberous *Begonias* over yellow *Musk*, and having half-standard *A. Thompsoni* with them, was bright and attractive. Crimson *Celosias* contrast grandly with the *Musk*. Quite one of the finest was a mixed *Begonia* bed (*La Fayette*, *weltoniensis*, *ascotensis* and crimson tuberous) with dwarf *Centaurea candidissima*, and *Pyrethrum Golden Feather* intermixed. *Arundo Lindleyana* was used above, and the edge was of *Mesembryanthemum*, banked outermost with *Echeverias*. The bed was oblong, 18ft by 12ft. Very simple, and yet very fine, was a bed of *Bouvardia corymbosa Humboldtii* (white) with *Viola J. B. Riding* (violet-purple) beneath. *Antirrhinum Pride of the Morning* (white), mixed, though not crowded, with *Henry Jacoby Pelargonium*, and having an edge of *P. Harry Hieover*, was good.

One of the larger beds contained *Agapanthus umbellatus* mixed with *Campanula pyramidalis* (the blue and the white), and *Marguerite*, undermost, edged also with *Pelargonium Little Trot* (like *Lady Plymouth*), and was handsome. Another fine combination included *Mrs. Pollock Pelargonium* and *Viola J. B. Riding* filling the centre; *Lobelia splendens* shooting up above, with fine plants of *Fuchsia Sunray*, and an edging of *Veronica Andersoni variegata*.

The foregoing notes include references to the best efforts and effects in the general bedding, but the larger sub-tropical beds are not particularly inspiring. One large oblong bed contained a great variety of plants, including *Musas*, *Cordyline indivisa*, *Cannas*, *Latania borbonica*, *Phormium tenax*, *Abutilons* in variety, *Ficus elastica*, 8ft high; *Melanthus major*, or Honey



Mr. Cave's Gros Maroc Grape.

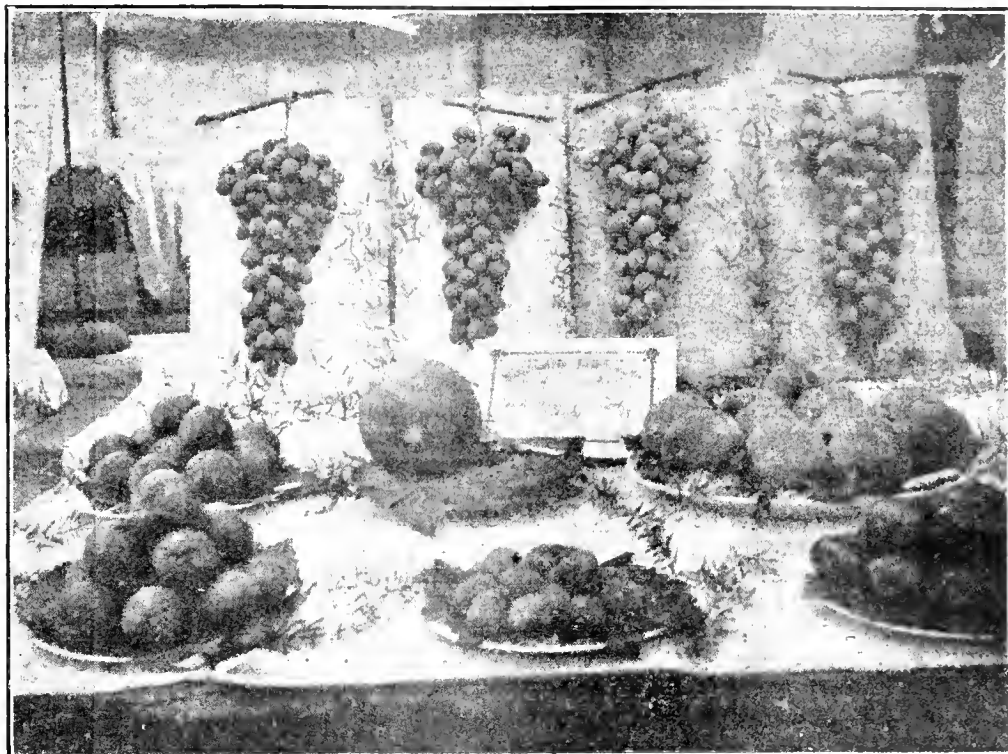
Flower (7ft), *Cuphea platycentra*, *Ricinus communis*, and *R. Gibsoni*; *Eucalyptus globulus*, *Dasyllirion Hookeri*, *Acacia lophantha* (10ft), *Fatsia japonica*, and other plants, having *Tradescantia zebrina* and *Euonymus radicans* over the ground. In Hyde Park we find Palms, *Eucalyptus*, *Cordylines*, *Phyllostachys*, and such similar plants in larger beds, with *Cannas* and *Funkias* beneath and as edgings. As a rule some *Bougainvilleas*, *Plumbagos*, *Acalyphas*, and plants named in my list on page 202, August 28, are employed in other beds, or are plunged deeply in the grass throughout the region of the beds.

#### Regent's Park.

Mr. Jordan maintains the floral decorative features of this park ever at the highest, and has developed the naturalising of plants in the grassy recesses and by the shrubby banks. In the springtime the park is crowded with brilliant *Crocuses*, *Daffodils*, and other flowers of the season; now it is *Hollyhocks*, single and double, and *Pentstemons*, *Snappedragons*, *Violas*, and hosts of other gay and handsome subjects. In the formal flower beds and borders are some charming displays. In an oval bed we find yellow *Carnations* over *Viola Blue Diamond*. A great bed of mixed *Fuchsias* in all sizes is quite a feature, and the plants are well flowered. The large sub-tropical bed near that containing succulents is again rich and at its best, but it is unnecessary to name the plants. One of the brightest small beds contain *Abutilon Savitzi* and golden *Celosias* over *Tradescantia zebrina*. There are also dwarf plants of red-leaved *Acalypha musaica* and *Chlorophytum variegatum*. Borders of crimson and golden *Celosia pyramidalis* intermixed, and having *Saxifraga muscoides* and white *Lobelia* over the ground beneath, is also very pleasing. A bed of *Araucaria excelsa* (5ft) with bushy *Marguerites* below them, in a round bed, gave charm, because it was novel. A narrow border having *Dactylis glomerata variegata* and bushy plants of *Begonia semperflorens* mixed with *Grevillea robusta* above, and *Saxifraga muscoides* as a broad edge, might be copied with advantage elsewhere. *Abutilon Thompsoni* and *Begonia Corbeille de Feu*, both as tall plants, the bed being edged with *Salvia Scalaria* (small, and grey leaved), and *Cineraria maritima*, deserves notice; and lastly there is a pretty little bed filled with white tuberous *Begonias* above blue *Lobelia*.

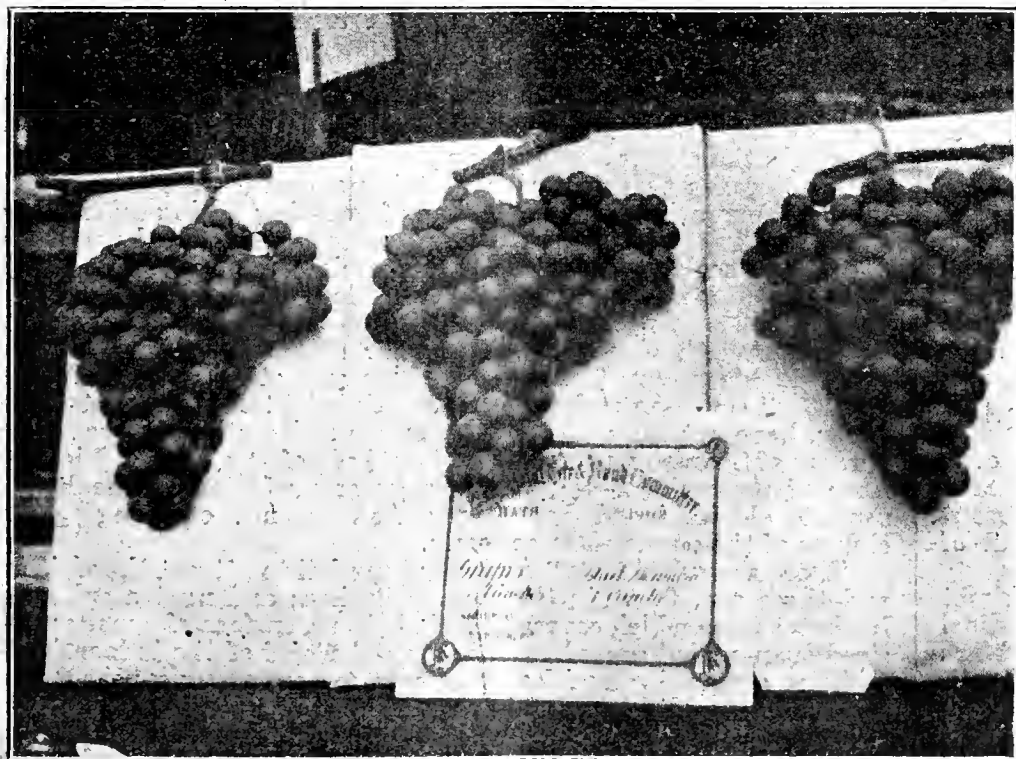
#### Victoria Park.

Bedding in this very large and interesting place in the East End of London is so furnished as to produce a brilliant display of flowers rather than refined foliar effects. A round bed with purple leaved *Celosia pyramidalis* above the yellow flowered *Musk*, and edged with *Alternanthera paraonychioides*, was neat and bright. The great scroll carpet bed each year conveys a supplicatory sentence of loyal tenour for King and country. The excerpt this year prays that "God and his angels guard our sacred throne," and beneath, or in front of this, "God Save the King." The words are easily read, for the large letters, formed neatly of *Echeverias*, stand out boldly from their setting of



Mr. J. V. Fleming's Eight Dishes of Fruit.

*Herniaria* and *Alternanthera*. The large bed of succulents provides another feature of interest, the more so this year because of two green-leaved *Agave americana* now flowering. The scapes reach 25ft or so in height. The yellow flowers seem to furnish special attractions and reward to the bees. Around the bed of succulents there are plunged *Agapanthus* and *Araucarias*. The colour and effects from the following were good:—An oblong bed with *Pelargonium Raspail* in the centre and a broad band of blue *Ageratum* surrounding it, the edge being of golden *Fuchsia*, probably *Meteor*. A three-winged geometrical bed had also scarlet *Pelargoniums* filling the centre, then a band of *Flower of Spring*, or similar variety, with the flowers of a purple *Viola* peeping through the leafage, and succeeded by another band of the dark leaved *Coleus*, outside of which came blue *Lobelia*, and lastly an edge of *Echeveria*. A round bed of dark leaved *Cannas*, edged with *Iresine* and *Echeveria metallica*, gave a study in dark red; while a similar shaped bed contained *Zea Mays variegata* with a dark crimson flowered *Antirrhinum* through and among the foregoing. In Victoria Park there is a deer enclosure with a colony of these beautiful sportive creatures grazing contentedly. Peacocks and peahens are about to be installed, and with their winter garden, a *Chrysanthemum* house, botanical garden, and spaces for cricket, football, and other recreations, their ground for lectures, mass meetings, bands, their bathing and boating lakes, and splendid roads for cycling on, all within the area of this park, the public within reachable distance of it have no cause to grumble at the variety of features furnished for their use and enjoyment.—J. H. D.



Black Hamburgh Grapes.

### Fruit at Bath Show.

Bath horticultural exhibition was held on August 27 and 28, and a report of the show appeared in last week's *Journal* on pages 229 and 230. To-day we illustrate some of the fruit exhibits, including a side view of the fruit tent, from photographs taken specially by Mr. E. E. Rye of Bristol. The collection of eight dishes of fruit on this page won first prize. This was staged by J. V. Fleming, Esq. (gardener, Mr. W. Mitchell) of Romsey, and included the following: *Madresfield Court* and *Museat of Alexandria Grapes*, *Pineapple Neectarines*, *Sea Eagle Peaches*, *Quarrenden Apples*, *Williams' Bon Chrétien Pears*, *Angelina Burdett Plums*, and *Triumph Melon*, an excellent collection.

The *Gros Maroe Grapes* were those staged in the class for any variety of black Grapes, by R. C. B. Cave, Esq. (gardener, Mr. C. Smith), and finer bunches are seldom, if ever, seen at any show. The *Black Hamburgh Grapes* on page 246 were products of Mr. Mitchell's skill, he who succeeded with the above collection of eight dishes of fruit. The fruit at Bath Show is uniformly of a superior quality. In a succeeding issue we will show Colonel Vivian's *Peaches* as grown by Mr. Strugnell; and a specimen *Fuchsia* from Mr. G. Tucker of Hibberton Marsh.



## Gadding and Gathering.

"HERE AWA', THERE AWA'."

### A Cricket Match of Interest.

For the first time since the Fruit and Vegetable and Floral Committees of the Royal Horticultural Society came into being, they met yesterday week to spend one afternoon together at the sport of cricket. The event was of marked success, for not only were there a goodly company of the fruit and floral leaders present, but each was there with the purpose to enjoy the game, and to contribute to the pleasure in it of the others. The day was as nearly perfect as possible.

Leopold de Rothschild, Esq., had placed his beautiful pitch at Gunnersbury Park for use by the visitors on this occasion, and the renowned gardens were open, too, these being inspected probably by everyone at the meeting. The cricket field itself is unequalled on its own merits or surroundings by any other west of Lord's or the Oval. The Fruit Committee batted first, and proved in the end that they possessed the more expert batsmen. Mr. G. Woodward was captain, while of the Floral Team, Mr. Howe, of Chrysanthemum fame, stood as leader. Both captains quitted themselves ably, the former having noteworthy support from E. Beckett, R. Parker, George Reynolds, and W. Iggulden, while the efforts of Messrs. W. Howe, J. Hudson, and C. R. Fielder, were the most helpful in augmenting the florists' score. As one witty member remarked, the "floor all" committee did not on this occasion justify its name, and several succeeded in "bagging their brace." In both innings the Fruit Committee attained the mastery, notwithstanding all manners of styles in bowling from 'dribblers' by Mr. Jones to the sky-high flights from Mr. Fielder. Even Mr. Richard Dean renewed his youth, and probably his thoughts flew back to fifty, or even sixty years ago, for he would be a youth of thirteen even with sixty years deducted. We heard—and may we not tell it?—of his having risen at three o'clock on the morning of the match to complete some literary work and be free to join his contemporaries during the day.

Mr. Bates proved an adept at "blocking," but "bloeked" once too often, for the ball went above, instead of below, and the bails came off. That was a pity, for he had not then scored. However, he was not alone in that respect. The game was generally interesting, and so satisfactory that Mr. Marshall intimated at the conclusion that he had received invitations from two prominent horticulturists for separate matches next year, and he trusted that the cricket meeting might become an annual affair. The umpires were Mr. S. T. Wright and Mr. Thomas Humphreys, to whom a vote of thanks was accorded.

Luncheon was partaken of in a large tent erected in the grounds, at which thanks were conveyed to the owner of Gunnersbury Park for his courtesy in having permitted the visit. In the company were noted Messrs. H. B. May, George Paul, John Wright, — Harrison (Leicester), J. Assbee, J. James, and A. Dean. The teams and scores were as follows:—

| FRUIT AND VEGETABLE COMMITTEE. |             |                  |                  | FLORAL COMMITTEE. |               |  |  |
|--------------------------------|-------------|------------------|------------------|-------------------|---------------|--|--|
|                                | 1st innings | 2nd do.          |                  | 1st innings       | 2nd do.       |  |  |
| R. Parker ..                   | 8           | .. .. 14         | C. E. Pearson .. | 0                 | .. .. 0       |  |  |
| A. H. Pearson ..               | 0           | .. .. 7          | C. J. Salter ..  | 0                 | .. .. 0       |  |  |
| G. Reynolds ..                 | 7           | .. .. 23         | C. Dixon ..      | 2                 | .. .. 0       |  |  |
| W. Bates ..                    | 3           | .. .. 0          | J. Hudson ..     | 7                 | .. .. 4       |  |  |
| E. Beckett ..                  | 10          | .. .. 1          | C. R. Fielder .. | 7                 | .. .. 1       |  |  |
| H. Esling ..                   | 2           | .. .. ..         | W. Howe ..       | 6                 | .. not out 17 |  |  |
| M. Gleeson ..                  | 0           | .. .. ..         | J. Walker ..     | 2                 | .. .. 4       |  |  |
| G. Kelf ..                     | 2           | .. .. ..         | E. Jenkins ..    | 2                 | .. .. 4       |  |  |
| G. Woodward ..                 | 6           | .. not out 20    | C. T. Druery ..  | 0                 | .. .. 0       |  |  |
| A. Dean ..                     | 0           | .. .. ..         | H. J. Jones ..   | 2                 | .. .. 1       |  |  |
| W. Iggulden ..                 | 7           | .. .. 16         | R. Dean ..       | 2                 | .. .. 0       |  |  |
| Extras ..                      | 2           | .. .. 6          | Extras ..        | 2                 | .. .. 2       |  |  |
| Total ..                       | 47          | for 6 wickets 87 | Total ..         | 32                | .. .. 33      |  |  |
| Fruit Committee's total ..     | ..          | .. .. 134        |                  |                   |               |  |  |
| Floral Committee's total ..    | ..          | .. .. 65         |                  |                   |               |  |  |
| Difference ..                  | ..          | .. .. 69         |                  |                   |               |  |  |

### Edinburgh City Gardens.

That new brushes sweep clean we are agreed, and changes in the superintendence of gardens, public or private, sometimes or indeed very often, result in alterations to the aspect of the grounds or in their routine display. The old order changeth, and the desires of to-day are other than those of yesterday. This leads me to say that Mr. J. W. McHattie, City Gardener in Edinburgh, has altered and improved the aspect of the bedding scene this year in Prince's Street Gardens. New beds entirely have been planned; old walks have been displaced, and a different style of bedding been inaugurated to that of years past, but of which I may write under another head.

The bedding this year is sub-tropical in character, and met with general approbation, although one friend of the old school with whom I spoke lamented that there was no "show," no blaze of flowery colour. But while the foliar effects subdue the brilliance begot of flowers by themselves alone, I, and others, were well content with the "show" made by *Violas* in the fresh made borders of sinuous outline which enliven the forefront of the sombre shrubbery by the railway route, where the centre of the ancient Nor' Loch lay. And by a shaded nook by the Waverley

Bridge, till the present year a sort of nursery-keep, the City gardener will soon present the citizens of my native hold with a Bamboo garden, which one has every reason to expect will become a successful and delightful feature. On those steep grass banks supporting the topmost terrace, next spring will see designs thereon, in *Crocus* hues, and soon the little corns will find their place within the soil. Shields, stars, and circles are the designs suggested.

Then there is the fountain end to be kept in mind. Pathways near this spot are to be renewed, and shrubberies replanted. £1,000 are being spent on new shrubs. Old friends returning will ask where they are! Who shall know the gardens? At Blackford Hill, where the city boundary is, the Japanese *Rugosa* Rose has been liberally planted, and certainly from a distance I admired the Golden Elder on its basal slopes. Water Lilies are to adorn the basin of the fountain in Prince's Street Gardens, and Daffodils are being naturalised on the wooded slopes beneath the crags of high-placed Edinburgh Castle. History and Art! yea, and Commerce too—remember the railway lying between.

But these are sufficient in the way of change to go on with. The most enterprising must be satisfied, and the dour conservative must set his teeth. Yet must we still gaze sadly eastward from the Castle Esplanade or Calton Hill to the barren slopes of crumbling basalt that unadorn those "Samson's Ribs?" The Crown authorities must emulate the City.

### Trinity Grove, Edinburgh.

The Poet Laureate most interestingly describes what joys and pleasures the little garden that he loves—*Veronica's Garden*—possesses and accords to him, but his sunny southern garden does not, I am sure, surpass in any one respect whatever, that wondrously fertile and cosy Eden nook surrounding the quaint old residence, once, of Queen Mary of Scots, and later in time, of Sir Walter Scott, which is to-day named Trinity Grove, Edinburgh. I am inaccurate to address it under Edina's sway; it lies within the postal district of the Port of Leith, and Provost Mackie of that seaport is its present owner. But Edinburgh and Leith here join, and the Grove may mark the northern limit, for a few yards further flows the Firth of Forth.

Trinity Grove has attracted the horticultural journalist much oftener than twice or thrice, and that lover of the beautiful in either art or Nature, the late revered David Taylor Fish, made frequent pilgrimage to the Grove, and his delight at the square Yew hedges—growths of many years—at the Cedars on the lawn, the mighty Poplar by the gate, the umbrageous, half-inclining, mossy old Pear tree by the bowling green, and which never fails to fruit, was always renewed, and with the Apple trees on the vegetable brakes, and the fruitful Grape Vines and Peaches under glass were a perennial source of pleasure.

Provost Mackie and his family are also truly fond of this unsurpassable garden, and duly appreciate its bounty. Grapes I have mentioned, and Peaches. Lo! for years they have borne a plethora of fruit, and still their vigour and prolificacy remain as great, or greater, as it almost appears to me who have known this garden over now a long period. It is difficult to say whether the Peaches or the Vines do the better. Certain it is, each are model houses of the ablest cultural practice, and by no other means than the constant and skilled attention of the gardener during his twelve years of office, could they have remained thus in excellence for so long a time. When I say that the experienced manager of Methuen's nurseries has been proud to bring a wealthy client down to the Grove, that he might see "What one of our men" can do. Pointing to the laden trees, the testimony need be carried no further. "One of our men," in this case, meant that Mr. A. McKenzie, the gardener, was a dealer with the firm.

Apple trees in the open are clean and in good heart. They bear so heavily that but little annual wood is made, and consequently the shoots are stout and well ripened. The sandy loam assists towards this condition, but it necessitates both a liberal supply of manurial enrichment, and of watering during a droughty summer. The Celery trenches have frequently the hose upon them, and so, too, have the Strawberries and the Roses. The Rose garden is a formal one, laid out in long beds, and surrounded on three sides by part of the beautiful hedges I referred to earlier, and the fourth side upholds espalier Apple trees, and a new Honeysuckle arch. Crimson Rambler and other suitable Roses have been set upon arches at the crossings of the walks, but these so far, have not fully succeeded. South and east of the rosery lie borders of Spanish and English Irises, beds of Dog's-tooth Violets, lines of perennial Phloxes, and a great profusion of the handsomest old-fashioned herbaceous flowers, not omitting giant clumps of the creamy Plume Grass.

There are other features which never fail to attract the visitor, and these are, first big Gooseberry bushes; and next a splendid Niphetos Rose which covers the whole inner surface of a moderate-sized span-roofed greenhouse, and on the roof of the indoor fern-rockery, a notable *Passiflora racemosa* screens many square yards with foliage and flowers which are present the whole year round. We are pleased to know that this interesting place of monastic mien is now in the hands of the respected Provost, and trust that he and those around him may long dwell there to enjoy its delights.—WANDERING WILLIE.



### Peasgood's Nonsuch Apple.

I have made great efforts to succeed with this magnificent Apple, but cannot yet say I have attained my wishes. I am aware they are longer in commencing to bear than most varieties, but when they do the patience of the grower is rewarded. A specimen that I lifted and root-pruned last autumn is now covered all over with lovely blossoms. I should like to ask some of your readers, should I take off those blossoms now, or will it prevent fruiting next year?—W. J. MURPHY, Clonmel.

### Mutations of Seasons.

The article which appeared under the head (September 4, page 214), discussing "the untoward nature of the weather this season," suggests a subject at once interesting and seasonable. I do not, myself, detect any deterioration of the climate of our island, and I have made weather notes and observations for now well nigh fifty years. I incline to the theory of cycles, and the opinion that, roughly speaking, a seven years' dry time is followed by a seven years' wet; and that this is probably now being the case. People in general, I think, have rather short memories regarding the weather, and reference to old journals will usually show that what we are denouncing as unprecedented is very much the reverse. At the same time, it must be admitted the weather has of late become demoralised to a very high degree, perhaps even to an unusual extent, and the terrible atmospheric disturbances which have taken place, and alas! are taking place, may very possibly have something to do with this. I can remember far worse seasons, where whole fields full of stooks showed a bright ring of green where the Corn was sprouting, but scarcely one marked with all the present phenomena. "Great earthquakes in divers places" are a well known prescribed feature in an approaching "end of the age."—A. C.

### A Good Crop of Raspberries.

In a season when the hardy fruit crops are so unsatisfactory in general, it is pleasing to have an exception to the rule. The only really good crops here have been Peaches, Gooseberries, and Raspberries. The latter has been an exceptionally good crop, a few details of which may be of some interest to readers of the Journal in this special fruit number. I may say that the canes are grown in the ordinary way, the stools being 4ft apart between the rows, and the same distance from each other in the rows. About six canes are allowed to each stool; these are pruned to three different lengths, the longest to about 4ft, and the shortest to 18in from the ground. By this method fruit is produced from the bottom to the top of the stool. The fruit on the lower part is somewhat shaded and protected from birds, and will, consequently, hang longer. Superlative is the variety grown, and is one of the best Raspberries that can be had for productiveness and appearance. The flavour, however, is not so good as some other varieties. In some localities it produces canes rather sparingly. Here just the reverse is the case.

The plot in question consists of three rows about 30yd long, each row containing twenty stools, or a total of sixty stools. They cover an area of 120 square yards, or about one-fortieth part of an acre. The actual weight of fruit gathered was 12 stone; this gives about 2½lb per stool. In this neighbourhood the retail price is 4d. per pound. The value of the crop would, therefore, be £2 16s. In the "Fruit Growers' Guide" an average crop of Raspberries is stated to be 1½ ton per acre, or from canes in full bearing 2 tons per acre. The crop here is considerably above the latter weight, working out, I find, to no less than 3 tons per acre. The value per acre at the same price, 4d. per pound, would be £112. No record has been kept previously, so cannot say how the crop this season would compare with other years. As the crop was a good one all the fruit was weighed as soon as gathered, with the above result. The fruit was not netted, consequently the birds would get some, and a quantity was destroyed during a very wet week, when it could not be gathered, or the crop would have been even greater than it was. I might add, that last year when it was so very hot, and everything dried up, this Raspberry stood the test well, giving a good crop, and the fruit lasting a long time in good condition.—J. S. U.

### Lilium giganteum.

At different times a good deal has been said about *Lilium giganteum*, but still it may be of interest to many of your readers to know how this fine Lily thrives in the west of Argyll. One specimen at Achmama, the property of Colonel Malcolm of Poltalloch, reached the height of 10ft, the circumference round the stem at ground level 13in, a fact I think worth recording. At the same time, at Poltalloch, the residence of Colonel Malcolm, three bulbs in a group flowered, the tallest one reaching the height of 8ft, with fifteen flowers. They grew in a border which cannot be called shady, but fairly rich in vegetable matter.—D. S. M.

### The Conference Pear.

I am very pleased to see you drawing attention to Conference Pear. The figure on page 230 is somewhat different from the great majority of my specimens, inasmuch as the fruit, as a whole, is gracefully curved on both sides—none straight. [Nor was ours.—Ed.] Shortly after the Pear Conference in 1885—after which it is named—the late Mr. Francis Rivers sent me a specimen, which has borne heavy crops in rather poor soil in my town garden ever since. This year it is about the only variety cropping fairly well. Such "old reliables" as Louise Bonne of Jersey, Williams' Bon Chrétien, Bergamotte Esperen, Marie Louise, Doyenné du Comice, and Jargonelle have small, imperfect fruits, or none at all. I have met none whose Pear crop is not sadly deficient.—W. J. M., Clonmel.

### Planting Conifers.

I fully endorse the remarks on the above subject made by "Pinus" in his "Notes on Conifers," on page 170. I have had under observation some Austrian Pines, English Yews, Retinosporas, and Cupressus, some of which were planted in autumn and some in spring. The latter in most, if not all cases, have done the best. The specimens were not large when planted, and were devoid of soil attached to the roots, as the majority of nursery stock necessarily must be in transferring it to a distance. Owing to the dry cutting winds, the plants received in spring were at once attended to by laying them in the heels to prevent the roots drying, and previous to planting the roots were immersed in water. The planting was carefully carried out, and a good soaking of water applied, followed by another during the drying month of April. Since then the weather has been propitious in regard to establishing newly planted trees and bushes. If a dry summer had prevailed, watering must have continued, otherwise they might not have fared so well. It is evident, however, that spring planting is reliable, and even safer than early autumn, for with a little judicious care good results must necessarily follow. There is little or no danger in transplanting trees with balls of soil from one part of the garden to another either in autumn or spring, or any suitable time during the winter. The details of planting described by "Pinus" are reliable, and if followed will ensure success in establishing the specimens.—E. D. S.

### One Reason why Gardeners should be Educated.

Having throughout the discussion on this subject, been very considerably interested, I experienced no small surprise that in its progress no one appeared on the scene to give effect to a phase of the question which your diffident servant the writer supposes to be a vital one. Though the average gardener claims the possession of an intellectual superiority over the members of some trades, it is doubtful if it is more than skin deep. It is needless to say that more than external polish is needed in the gardener. His avocations bring him in daily intercourse with a class—our British nobility—who, I say with pride, are pre-eminently the foremost in the world. Pedigree, education, and refinement are assuredly their inheritance, and it is by no means unreasonable to think that those, combining these invaluable qualities, would greatly appreciate, at least, a semblance of them in their servants who hold offices of trust and importance. How essential it is that such a servant deports himself in a highly creditable manner in the presence of a class who must be extremely sensitive to every little symptom of vulgarity or rudeness! To gain this high standard of excellence in one's conduct is not such an easy matter as one would suppose. It is the work of a lifetime, and without due regard to indefatigable studying and discipline, no one can ever hope to achieve it. No man of spirit would feel contented to rest under the stigma which brands the boorish one, or feel at ease beneath the appellation of puffed fool, the exponent of verbosity, or utterer of jargon. Truly the gardener must be a cultured gentleman. I am sorry to say many of them are not so; therefore the need for culture.—AGNO.



## Experiments with Plants.

The members of the St. Andrews and East of Fife Farmers' Club paid a visit on August 25, to Dr. J. H. Wilson's experimental plots at Greenside Nursery. The plots were reduced to a minimum size, the object being not to test the results of growing certain crops in large bulks, but to carry out with a few plants experiments which demand constant and close inspection. The series was planned primarily with the view of securing material for the University classes conducted by Dr. Wilson. The plots include a very complete set of agricultural grasses and Clovers, and also the less commonly cultivated plants, such as Lucerne, Sainfoin, Serradilla, Bokhara Clover, Comfrey, Chicory, Burnet, Buckwheat, Flax, &c. Attention is given to plant parasites and diseases. An interesting root parasite on Clover, the Broomrape, was in flower. This was established by sowing the seed of the Clover and the parasite together. The inoculation of Rye with ergot formed another very interesting experiment. The germinated ergots were new objects to the majority of visitors. Rust, smut, mildew, finger-and-toe, and sprain received a share of study. As is well-known, Dr. Wilson has long been an authority on plant hybridisation. Numerous new garden hybrids of value, including fruits such as Brambles, were seen in the nursery. In the plots was found a very remarkable series of vegetables derived from crosses between Brussels Sprouts and Broccoli, Savoy and Brussels Sprouts, Curled Kale and Broccoli, &c. The object in crossing these was twofold—to gain insight as to the effect of deliberate intercrossing of the varieties of the Cabbage family in the matter of reversion to the old stock, and, if possible, to secure new races of vegetables. The new plants were extremely vigorous, and presented bewildering variety of shape and tint. A remarkable hybrid between Curled Kale and Charlock was in flower. It partook most of the latter parent, but was much taller. Crossed Swede and yellow Turnips, and crosses between these, were in abundance, and were regarded as very promising. A large number of crossed Potatoes was noted. Although only sown in the middle of March last, the plants are expected to bear a full crop of tubers this season. Many were in flower, and the stems of many were 3ft. high. It was instructive to find a great variety in colour of leaf, flower, and tuber in seedlings from one and the same fruit. The most remarkable objects in the plots, however, were probably Dr. Wilson's new hybrid Oats. They were the result of six distinct crosses, including white Canadian, English Potato, Waverley, &c. All presented most surprising vigour; indeed, it was hard to believe that the new plants were from single grains sown at the same time and grown under the same conditions as the parent Oats seen alongside. The tallest—Goldfinder crossed with English Potato Oat—reached the height of 7ft 8in. The heads of the hybrids were commonly enough 18in long, and in one case the number of grain-bearing stems produced by one plant was twenty.—("Dundee Advertiser.")

## A Classification of Sweet Peas.

For a considerable period the committee of the National Sweet Pea Society has been of the opinion that it was desirable to formulate some scheme of classification, and at the recent most successful show this was demonstrated in a very forcible manner. It was apparent that the growers were not in harmony in regard to the colours of many varieties, while some which were staged in one special colour class were also represented in another which should have been totally dissimilar. It was obvious that some remedy for such an anomalous state of affairs was essential, and it was procurable only by an election of varieties which classified them under specified colours.

At a meeting of the executive committee, held on July 29, it was resolved that classification papers be printed and distributed amongst members of the committee, as well as growers of repute, whether they were members of the society or not. It was clearly seen by the committee that the date of distribution was fully late, as many varieties were so far past their best that some of the colour and form characteristics were rapidly failing. The necessity for the work was, however, so very imperative, that this disadvantage had, perforce, to be overlooked, and the committee relied upon the wide knowledge of those beautiful flowers, known to be possessed by the gentlemen who filled in the lists. Nor was this confidence misplaced. It was speedily found that there was a strong consensus of opinion in favour of the best varieties, and it was only when we came to unimportant, and often variable varieties, that any material divergence of opinion was manifest.

The committee is convinced that the varieties which occupy the first, second, and third places under the several colour headings—and to which the votes each received are attached—are the best of those in general cultivation. Several varieties, like Dorothy Eckford and Countess Spencer, would have received

many more marks had they been known, and to this fact alone must be attributed the positions they occupy in the accompanying tables. The committee desires it to be fully understood that this is its first attempt at classification, and that it was made late in the season, in consequence of which it may be subject to expansion, emendation, and general improvement in future seasons. Many growers have asked for lists of the best twelve, twenty-four, and thirty-six varieties to be embodied in the schedule of next year's show, and these the committee will prepare in due course, though their necessity is reduced by the appended tables.

It will be observed that in each case a certain number of varieties are above and a certain number below the line; the latter are there placed either because they have been superseded by others above the line, or because they are not sufficiently well known for an authoritative opinion of their merits to be expressed. One or two sorts that were inserted in the election papers have been excluded because absolutely nothing was known about them. Growers are assured that any variety they consider misplaced this year will find its proper level in the classification of the Sweet Pea that, it is hoped, the National Sweet Pea Society will annually undertake.

As the annual meeting of the society will not be held until January, there was a clearly expressed desire that the results of the work of the committee be published early, so as to enable the seed merchants to include them in their catalogues in the form of recommendations, as they are, by their positions, proved to be of superior merit. The committee, therefore, request the co-operation of the gardening Press, which has done so much to further the interests of the society, to add to its kindness by giving publicity to this election.

| CRIMSON.  |  | ROSE AND CARMINE.  |  |
|---|--|--|--|
| 27 Salopian   |  | 23 Prince of Wales   |  |
| 24 Mars   |  | 20 Her Majesty   |  |
| 15 Firefly  |  | 18 Mrs. Dugdale  |  |
| Cardinal  |  | Royal Rose   |  |
| Brilliant   |  | Lord Kenyon  |  |
| Duchess of Edinburgh  |  | Lord Rosebery  |  |
| Igne  |  | Splendour  |  |
| * Invincible Scarlet  |  | Colonist   |  |
| * „ Carmine   |  | Adonis   |  |
| * For the purposes of this classification and for exhibition these are considered synonymous. |  | Fashion  |  |
|   |  | Novelty  |  |
|   |  | Ovid   |  |
|   |  | Princess Beatrice  |  |
|   |  | Eliza Eckford  |  |
|   |  | Miss Hunt  |  |
| PINK.   |  | ORANGE SHADE.  |  |
| 24 Prima Donna  |  | 21 Gorgeous  |  |
| 23 Lovely   |  | 20 Lady Mary Currie  |  |
| 19 The Hon F. Bouverie  |  | 19 Miss Willmott   |  |
| Countess of Lathom  |  | Chancellor   |  |
| Princess Beatrice   |  | Countess of Powis  |  |
| Countess Spencer  |  | Oriental   |  |
| Katherine Tracey  |  | Lady Penzance  |  |
| Mrs. Gladstone  |  | Meteor   |  |
| Peach Blossom   |  | Orange Prince  |  |
| Royal Robe  |  |  |  |
| Isa Eckford   |  |  |  |
| BLUSH.  |  | PICOTEE EDGED.   |  |
| 21 Duchess of Sutherland  |  | 18 Lottie Eckford  |  |
| 14 Modesty  |  | 14 Maid of Honour  |  |
| 9 Countess of Aberdeen  |  | 11 Golden Gate   |  |
| Sensation   |  | Butterfly  |  |
| Fairy Queen   |  |  |  |
| Lemon Queen   |  |  |  |
| California  |  |  |  |
| Blushing Beauty   |  |  |  |
| STRIPES AND FLAKES — RED AND ROSE.  |  | STRIPES AND FLAKES—PURPLE AND BLUE.  |  |
| 25 America  |  | 20 Princess of Wales   |  |
| 18 Aurora   |  | 19 Senator   |  |
| 18 Mrs. Jos. Chamberlain  |  | 15 Grey Friar  |  |
| 13 Pink Friar   |  | Wawona   |  |
| Gaiety  |  | Juanita  |  |
| Coronet   |  | Midnight   |  |
| Mikado  |  | Columbia   |  |
| Queen of the Isles  |  | Purple Striped   |  |
| Invincible Striped  |  | Striped Celestial  |  |
| YELLOW AND BUFF SHADES.   |  | BICOLORS.  |  |
| 25 Queen Victoria   |  | 19 Triumph   |  |
| 24 The Hon. Mrs. Kenyon   |  | 17 Little Dorrit   |  |
| 21 Mrs. Eckford   |  | 14* Blanche Ferry  |  |
| Lady M. Ormsby Gore   |  | Prince Edward of York  |  |
| Primrose  |  | Countess of Shrewsbury   |  |
| Venus   |  | Jeannie Gordon   |  |
| Golden Gleam  |  | Duke of York   |  |
| Gleam of Brockhampton   |  | * Earliest of All  |  |
|   |  | Lady Beaconsfield  |  |
|   |  | Empress of India   |  |
|   |  | Painted Lady   |  |
|   |  | Apple Blossom  |  |
|   |  | Bronze King  |  |
|   |  | Lady Skelmersdale  |  |
|   |  | Delight  |  |
|   |  | * For the purposes of exhibition these varieties are considered synonymous |  |

## BLUE.

26 Navy Blue  
24 Countess Cadogan  
22 Captain of the Blues  
Emily Eckford  
Baden Powell

Imperial Blue  
Grand Blue  
Madame Carnot

## MAUVE.

17 Dorothy Tennant  
10 Admiration  
6 Fascination

Violet Queen  
The Queen

## VIOLET AND PURPLE.

15 Duke of Westminster  
12 Duke of Sutherland.  
11 Duke of Clarence

Monarch  
Indigo King  
Purple Prince  
Waverley  
Black Purple

## FANCIES (THOSE WITH MORE THAN TWO DISTINCT SHADES.

6 Lottie Hutchins  
4 Stella Morse  
3 Coquette  
Duchess of Westminster  
Duchess of York  
Gracie Greenwood  
Mrs. Fitzgerald

Dolly Varden

## MAGENTA.

7 George Gordon  
7 Captivation  
5 Calypso

## MARONE AND BRONZE.

24 Othello  
23 Black Knight  
22 Stanley  
Shahzada

Boreatton

## LAVENDER.

25 Lady Grisel Hamilton  
22\* Countess of Radnor  
19 Lady Nina Balfour  
\* New Countess

Princess May  
Celestial  
Creole

\* For the purposes of this classification and for exhibition these varieties are considered synonymous.

## WHITE.

27 Blanche Burpee  
26 Sadie Burpee  
24 Emily Henderson  
Dorothy Eckford  
Mont Blanc

Mrs. Sankey  
Queen of England  
Alba magnifica  
White  
White Eagle

## FANCIES (continued).

Ramona  
Alice Eckford  
Captain Clark  
Carmen Sylva  
Etna  
Rising Sun  
Vesuvius  
Crown Jewel  
Emily Lynch

## CERISE.

9 Coccinea

according to the character of the soils, giving the results of the different varieties from each centre. Other hardy fruits were classified in the same way, and the effect of the different characters of soils upon Strawberries were most strongly marked, as shown by the reports.

In conclusion, the lecturer said the hardy fruit industry in Yorkshire might become a more important one than it is at the present time. There is much land in various parts of the county well suited to their growth. In private gardens, good hardy fruits are often grown under the most difficult conditions, but only under exceptional cultivation, the cost of labour and material being only secondary considerations. When planting for market purposes in a county like Yorkshire, special attention should be given in the choice of suitable soils, sheltered positions, and in the selection of those varieties of fruits suitable to the climatic conditions, as mistakes were easily made, with the result that the profit and loss account afterwards would possibly be represented on the wrong side of the balance-sheet.

## Tomatoes for Early Fruiting.

In many establishments there is no convenience for raising sturdy Tomato plants for early fruiting, the house in some cases being too lofty, and others too dark. To overcome this difficulty seeds should be sown early in September and allowed to germinate under cool, airy conditions. When a few leaves are formed pot them into 3in pots, placing two plants at the sides of each pot opposite each other. So soon as the plants have taken to the soil let them be fully exposed to the light in a cool, well ventilated house in order to secure sturdy, short-jointed plants. They must not be exposed to cold draughts, or allowed to become stunted for want of root room.

To prevent the latter, pot the plants into well-drained 5in pots as soon as the 3in pots are full of roots, and everything should be done to secure the happy medium between a sappy, lanky growth and a thin, starved, sickly plant. The compost should consist of four parts medium fibry loam, and one part either mortar scraps or charcoal, ranging from powder to portions the size of horse beans. With attention to other details, which will readily suggest themselves to the observant cultivator, we shall have sturdy plants ready either to pot into fruiting pots, or to plant in a narrow shallow border by the first week in January. As most of the plants will be showing one or more bunches of blossom, and in some cases have fruit set, with a suitable house and good management fruit will be ready for use early in April—a season of the year at which every addition to the vegetable list is exceedingly useful and highly appreciated. Moreover, armed with a batch of plants of this description, the cultivator is under no necessity of trying to raise substantial plants at a season when the days are short and dark, conditions which often render his best efforts futile.

There are so many good varieties of Tomatoes now on the market, that it is difficult to mention any one as the best for general cultivation. For late winter and early spring fruiting we have found none to equal Sutton's Winter Beauty. The fruits are a little rough, especially the earlier ones, but with due care it sets freely and produces very heavy crops. A hint may be here given regarding the pollination of Tomatoes in winter, as owing to the prevailing dull, damp weather, the best varieties may fail to set a full crop without extra trouble on the part of the attendant. Brushing the blooms with a camel's-hair brush is not always reliable, simply because the dehiscence of the anthers is "porous," and hence the pollen can only escape through small openings at their apex.

### Pollination of the Tomato

would be far more effective at any season of the year were the dehiscence of the anthers longitudinal, as is the case with the *Amaryllis*, *Liliums*, and indeed the majority of flowers; and this is a structural defect which raisers of new varieties should endeavour to breed out. The present dull, wet season has borne testimony to the urgent need of a race of Tomatoes whose pollen grains may be more readily dispersed, as on all hands complaints are being made that the plants have not set good crops, especially in the early part of the present season. When the weather is bright, and the air in the house dry and buoyant, gently tapping the plants is more effectual than brushing, but we so seldom get these conditions during the first two months of the year, that it is best to resort to more certain methods, as to lose the first bunches of fruit would largely nullify our previous efforts.

In the late and early months of the year we take it for granted that neither brushing the blooms nor tapping the plants are reliable. The safer plan is to remove the anthers entirely soon after the flowers are fully opened. This is best done by using a pair of fine-pointed forceps, care being taken not to injure any part of the gynoecium—that is, the stigma and ovary.

The anthers should be placed on paper in a warm dry position. Twenty-four hours will generally suffice to dry up the moisture

## Hardy Fruit in Yorkshire.

A lecture was delivered on September 2 by Mr. Alfred Gaut, of Yorkshire College, Leeds, before the Royal Horticultural Society, upon the growth of "Hardy Fruits," in which he said Yorkshire, taken as a whole, is subject to much variation in climate and temperature. The physical configuration of the county has a great bearing upon its hardy fruit culture. High, barren mountains and hills, with their sides sloping to all parts of the compass, numerous sheltered vales, and flat open country, in places near the sea level, are its main features. Bounded on the east and north-east by the German Ocean, it is much subjected to cold winds and fogs coming off the sea, and fruit trees, especially when in flower, suffer much from these causes. Where the coast is low and bleak, these influences are felt for some distance inland, while in the more sheltered vales, especially when well wooded, the fruit crops do not suffer so much. On the west the Pennine Chain runs the whole length of the county, and the westerly winds, sweeping down from these high altitudes, are rather cold, and this naturally has a retarding influence upon the hardy fruits in the vales. Towards the north the country is open and exposed, and, from this quarter the winds sweep down the vale of York. This shows what an important factor good shelter is to successful fruit culture in Yorkshire.

The geological character of the surface soils and subsoils is as strongly marked as its main physical features. Anyone well acquainted with the county can easily trace out the main lines of the chief hardy fruit growing districts. These extend from the north, down the great central vale of York, sweeping round by the vale of Pickering, following the Ouse valley to the mouth of the Humber, and over the flat alluvial plains by Thorne and Doncaster, and also along the main courses of the rivers. Continuing his remarks, the lecturer spoke of the large Pear trees between Thirsk and Gilling, one as measured, being 46ft high, and large in proportion; the fruit industry and the soils in the Pickering valley, a large Strawberry farm at Sutton-on-Hull, and samples of fine Apples, as grown near York, Selby, Thorne, and Barnsley; the noted Yorkshire Winesour Plum and the Whixley Cherries, and the effects of smoke from the chimneys of the collieries and factories upon the trees. All the various lists of hardy fruits were arranged under tables by the lecturer, and classified



and render the pollen free and powdery. By means of a couple of needles fastened into small sticks the anthers may be dissected so as to expose the pollen chambers. The pollen may then be shaken upon paper, or a small camel's-hair brush may be loaded with the grains by brushing the dissected anthers. Having thus secured abundance of pollen, the stigmas may be pollinated by carefully brushing them with the pollen-laden brush with every confidence of securing a good set and early crop, which will be an abundant reward for the extra trouble taken.  
—J. H. W.

## Literature.

### Orchard and Bush Fruit Pests.\*

This cheap little pamphlet contains a good deal of information which may be very valuable to the gardener, and deserves to have an extensive sale. Suggestions are made for the prevention of insect attacks upon fruit crops, and a good selection given of insect killers, some of them very powerful.

We may remark, however, that, as a matter of individual opinion, we object to the poisonous compounds in which arsenic or copper figure. We think sometimes of a remark made by Mr. Abbey in this Journal, that, after all, you can hardly have a better remedy for most insects than clear rain water, applied in a fine stream or spray.

One observation of Mr. Warburton's all gardeners would do well to lay to heart, that there is a period in the history of each troublesome insect when it is, so to speak, delivered into our hands. That is the time to take prompt measures, not when the damage done by it is prominent, and yet it cannot be so easily destroyed. In notes upon the winter moth, the author does not refer to the presumed fact that the males sometimes bear their companions upwards to oviposit, thus rendering the sticky applications of little use. We do not expect a small book like this to be comprehensive, but we are surprised two such well known residents on fruit trees as the lackey and the small ermine caterpillars should be unchronicled. In briefly describing, too, the Black Currant mite, allusion might have been made to the kindred species, which much disfigure the Pear and Plum.

#### Publications Received.

"Nature Study Journal," No. 4 contains a Romance of a Museum, a Country Walk, School Gardens, a Spring Walk, &c. \* \* "Le Moniteur d'Horticulture," July 10, has a coloured plate of *Kitaibelia vitifolia*. "Transactions of the Massachusetts Horticultural Society for the year 1901," part 1 contains Evolution of American Horticulture, Evergreens for Winter Effect (illustrated), "Studies of some Tree-destroying Fungi," &c., &c. \* \* "The Canadian Horticulturist" for August, special features, Shortening—In Pruning, the Fruit Crop, Canadian Maples, Floral Notes for August, &c. \* \* "Report on the Phenological Observations for 1901," by Ed. Mawley, F.R.Met.S., &c. \* \* "Le Mois Scientifique," June, 1902. \* \* "Jornal dos Agricultores," from Rio de Janeiro, June 30, 1902. \* \* "Gartenflora," August, contains coloured plate of *Cypripedium hybridum* Frau Geheimrat Borsig. \* \* "Cassell's Dictionary of Gardening," part 16, price 7d. net. \* \* "The Ceylon Observer," July 25, 1902. \* \* "The Tropical Agriculturist," July, contains South Africa Recommended to Young Men with a Little Capital, Rubber Planting in Costa Rica, Useful and Ornamental Timbers, the Banana, Australian Coffee Cultivation, Composition of the Bread Fruit, How to Take Quinine in Malaria, Plant Breeding, Plant Sanitation in India, &c. \* \* "The Ceylon Handbook and Directory, and Compendium of Useful Information," to which is prefixed a statistical summary for the colony, and specially for the planting enterprise, up to June, 1902. Colombo: A. M. and J. Ferguson. \* \* "Orchard and Bush-Fruit Pests, and How to Combat Them," by Cecil Warburton, M.A., F.Z.S., with twelve illustrations. John Murray: London, price 6d. \* \* "A New System of Heating, by Steam and Hot Water Combined," Am. de Meyere, engineer, 53, Boulevard de l'Ecluse, Ghent. \* \* "Business, Illustrated," No. 1, July, 1902, 1s. An interesting and useful magazine. \* \* "Russia," an illustrated journal (6d. net) of policy, literature, industry, commerce, art, &c. \* \* "Cassell's Saturday Journal." \* \* "Gartenflora," September 1, contains a coloured plate of Conference Pear. \* \* "The Florist's Exchange," August 23, containing a report of the S.A.F.O.H. Convention; also "The American Florist," a special Convention number, beautifully illustrated with special photographs and on stout paper; a business-like and useful number. \* \* "The Tropical Agriculturist," for August; A. M. and J. Ferguson, Colombo, Ceylon; contents: Artificial propagation of oysters. Cocoonut plantation in the Malay States. Does the moon influence vegetation? Economic resources of the Straits Settlements, and the Malay Peninsula. Farming in Orange River Colony. Forestry and Fruit Growing in Orange River Colony. Pineapple as a digestive aid, &c.

\* "Orchard and Bush Fruit Pests, and How to Combat Them." By Cecil Warburton, M.A., F.Z.S. John Murray, Albemarle Street, 1902. Price 6d.

## Societies.

### R.H.S., Scientific Committee, September 2nd.

Present: Dr. Masters, F.R.S. (in the chair), Dr. M. C. Cooke, Dr. A. B. Rendle, Messrs. E. M. Holmes, J. Douglas, Odell, Rev. W. Wilks, and Mr. Gaut (visitor).

*Phyllotaxis of Aloysia*.—Mr. Odell brought specimens showing variations in the number of leaves to a whorl on different shoots. On the secondary shoots, which resulted from the pinching of the primary one, the leaves were in whorls of three.

*White Lavender*.—Mr. Odell showed flowers of this variety to exemplify their fragrance, which had been disputed.

*Double spathe of Richardia Elliottiana*.—Mr. Douglas brought a specimen of a double spathe in this plant, in itself not an uncommon occurrence, but the spathes in the present examples were remarkable for being deeply pinnately lobed.

*Helianthus Miss Mellish*.—Specimens were exhibited showing the decay and rotting of the root-stock and stem apparently due to fungus "sclerotia," which were found in the tissues. Dr. Cooke undertook to report on the specimens on another occasion.

*Peloria in Antirrhinum*.—From Mr. Lorenz, of Erfurt, came specimens of regular flowers of this plant. The regularity in this case is owing to the increase of the irregular portions, so that there are five spurs instead of one only, thus constituting it a case of irregular peloria. Mr. Lorenz has succeeded in "fixing the variation and inducing the development of a race."

*Celery Leaves*.—Some specimens were affected by a fungus allied to *Phyllosticta* or *Sphaerella*.

*Twin Cucumbers*.—A specimen of this not uncommon peculiarity was exhibited. The appearance is probably due to the union of two flowers in a very early stage of their development.

*Cracked Pears*.—Specimens were shown showing the effect of *Fusicladium* in arresting the growth of the rind of the Pear, which cracks as the flesh beneath increases in bulk. Spraying in an early stage is the only means of preventing the mischief.

*White Heather*.—Mrs. Streathfield sent specimens of the white variety of *Erica Tetralix* from a Surrey common.

*Silver-leaf disease*.—A letter was read from Professor Percival: "From sections of the stump through the points of union of scion and stock, it seems very probable that the fungus which causes the disease had entered at the point of grafting in this particular case. Such examples are not at all uncommon, although in many cases the disease starts in the roots below ground. The disease, I have abundantly proved this year in my own garden, can be induced with the greatest ease by inoculating any part of the tree either above or below ground. The fungus (*Stereum purpureum*) does not itself extend very far in the tissues of the diseased trees, but some of its products, or products resulting from its action on the tissues of the trees, circulate rapidly in an upward direction, and induce the peculiar changes in the leaves. Downward circulation also takes place, but much more slowly. In several cases of inoculation with the fungus on long branches of plants, the disease has spread downwards even after the greater portion of the branch has been cut away at a point several inches below the point of inoculation."—John Percival.

*Copper as a cause of yellow foliage*.—Mr. Gaut alluded to the yellow tint assumed by the foliage of certain Apple trees in Yorkshire. The want of colour had been attributed to the presence of copper in the soil, but as it was considered that the evidence in support of this opinion was inadequate, further information was solicited.

*Melan disease*.—Mr. Willard sent specimens of this disease, characterised by rotting of the bine, and attributed (conjecturally) to the presence of bacteria. Acting on a suggestion of Dr. Masters, Mr. Willard had inoculated a seemingly healthy plant with some of the juice from a diseased plant. The result was the development of disease within a very short time. The committee, however, thought the result of the infection would not have manifested itself so rapidly, and that the inoculated plant would shortly have shown symptoms of the disease even if it had not been inoculated.

### National Dahlia, Sept. 2nd.

From the hon. secretary we have received the following list of special awards:—Silver Medal for best bunch of Cactus Dahlias in trade classes to Messrs. Stredwick and Son for Miss F. Stredwick.

Silver Medal for best bunch of Cactus Dahlias in amateur classes to Mr. P. W. Tulloch for Mrs. Mawley.

Bronze Medal for best New Show or Fancy Dahlia to Messrs. Keynes, Williams, and Co. for Henry Clark.

Williams' Memorial Medal awarded to Mr. L. McKenna for twelve bunches of Cactus Dahlias (amateurs).

Silver Medals for single Dahlias awarded to Messrs. J. Cheal and Sons; Mr. F. W. Seale; Mr. J. F. Hudson.

Non-competitive Exhibits: Silver-gilt Medals to Messrs. Cannell and Sons, to Hobbies, Ltd. Silver Medal to Messrs. Cutbush and Sons. Bronze Medal to Messrs. Jones and Sons. Vote of thanks to Messrs. Barr and Son, and to Messrs. Smith Bros.

### Reading Horticultural.

The Reading Horticultural Society held a successful exhibition on Wednesday, August 26, being favoured with fine weather. The numbers who paid the highest price for admission were larger than they have been for a long time, whilst at the close of the day there were about 5,000 present. But whilst the show was well supported by visitors, it cannot be said that the society was as well supported as it might have been by the exhibitors, or rather by those that should have been exhibitors. Many familiar names were missed from the show cards.

For quality the vegetables in competition for Messrs. Sutton's prizes made the finest show seen anywhere this year in England. The entries fell considerably short of last year, only 400 exhibits being staged, against 540 the previous year; but the unfavourableness of the season, which has manifested itself at every show, easily accounts for this, whilst it must be remembered that the entries for the year before last only numbered about 400. For the Society's Challenge Cup, valued at 20 guineas, three groups were sent in for competition against five last year. Mr. F. D. Lambert, of Moor Hall, Cookham (gardener, Mr. Fulford), had previously carried off the trophy twice, and again won it. He thus is possessor.

In the open cut flower classes the Dahlias and the "bunches of twelve" were most noticeable. The former were very much admired, especially those sent in by Mr. J. Walker, of Thame, who was an easy first for the Show, single, and Cactus varieties with some magnificent blooms both in colour and perfection of natural arrangement. Messrs. Cheal and Son, of Crawley, took second. Mr. R. Moss, Hawley, Blackwater, was third for single and Cactus varieties, but he excelled in his bunches of cut flowers, which were magnificent.

Fruit made a good show considering the season, some fine Grapes coming in for a good deal of attention. Especially noticeable were three fine bunches of Muscat of Alexandria, which were much admired for their colouring, although this is a bad year for colouring. They were shown by Mr. Galt, gardener to Mr. Keyser. Sir Charles Russell's noted Black Hamburg variety were also conspicuous, and they gained first prize. Some extraordinary good Peaches (Sea Eagle) from his gardens were also first prizetakers. Culinary Apples were fairly good. Quite the tit-bit of the show was the vegetables staged for competition in Messrs. Sutton's prizes, and experts say that nothing has been seen in England to beat them this year. Mr. R. W. Hudson, Danesfield, Marlow (gardener, Mr. Gibson), had a collection, every specimen being typical of its kind. The Right Hon. Lord Aldenham, of Aldenham House, Elstree (gardener, Mr. Beckett), made a good second, but was a little weak in Beet, Carrots, and Parsnips. Sutton's New Red Intermediate Carrots in Sir Wyndham Portal's exhibit, which got fifth prize, were the best Carrots in the show; they were perfect models. There were some excellent Tomatoes on view in the open class, Mr. Hudson's Perfection (Sutton's) being splendid specimens. The Forbury Gardens were looking their best, and were much enjoyed by the visitors.

There were several entries not for competition, which were not the least attractive features of the show. First mention should be made of a large, magnificent group shown by Messrs. Cutbush and Sons, nurserymen, of Barnet and London. For variety and quality of blooms the group would be hard to beat. Messrs. Cheal and Son, Crawley, had Cactus Dahlias, and George Prince, Roses.

### Liverpool Amateur Gardeners.

Hospital Night is always a great event in the history of this progressive society, and the inmates of the Children's Infirmary, Myrtle Street, had a welcome surprise when on the following day they found the wards completely transformed by the exhibits, which were all sent up by the members on Thursday last. Cactus Dahlias, considering the season, were remarkable, no fewer than nine staging. The first prize went to a new member, Mr. Wallace, with an almost perfect collection; Mr. Robins the second. For Gladioli, Mrs. McGregor was first. This lady was first for an epergne composed of pink Carnations and Gypsophila; also for superior cut flowers and Asters. Mr. Hitchmough had a capital show of Dahlias, Asters, and Tomatoes, and Mrs. Stevenson a choice Fern. The second prize for Tomatoes is worthy of special mention, being grown by Superintendent Muir, of the Hatton Garden Fire Station, in a small roof greenhouse. Mr. Ellison had the best cut blooms, the leading plant in bloom, a tuberous Begonia, coming from Mr. Wallace. A special prize for the most suitable gift of flowers, fruit, &c., was offered by Mrs. Muir. As this might be an inspiration for other shows to help a good cause, I quote chief contents: A chicken, bunch of Grapes, bunch of Bananas, Apples, Pears, handsome selection of scrap books, flowers, &c. This from Mrs. Morris. Miss Davies and others exhibited well. A good number of fresh eggs were sent by Mr. R. Muir, of Formby. The annual excursion for members was held last week, by the kind permission of the Hon. W. Walsh in Knowsley Park, the beautiful seat of the Earl of Derby, K.G. The party drove through many of the drives, the

scenery of the distant country being much admired. One of the garden staff had been deputed to escort the party through the grounds, which at the present time are quite delightful, the Rose garden evidently causing pleasure. Substantial refreshments were then served, after which the party returned to Liverpool, much elated with all they had seen.—R. P. R.

### Sandy and District, August 28th.

This show was held in the Park of Sandy Place on the above date, and proved to be one of the most successful shows that had ever been held. The competition was very keen. The class for ten stove and greenhouse plants went to Mr. Cypher, he showing in his usual form. The groups were a strong exhibit, the first prize going to Mr. Finch with a very neat and tasteful arrangement. Roses were fine for the season, and both classes fell to Harkness and Co., followed in each class by G. W. and H. Burch, Peterborough. Dahlias were very fine, Keynes, Williams, and Co., and other well known growers, taking the lead.

Sweet Peas were largely shown, and R. M. Bradley, Peterborough, proved to be the best exhibitor, closely followed by W. and J. Brown, Peterborough. In the smaller plant classes, where nurserymen are excluded, for six foliage plants, Sir A. Marshall (gardener, Mr. J. Humfries) led, and stove and greenhouse Ferns also went to the same exhibitor. Among other successful competitors in this class were Lord Peel, of Sandy Lodge; Mr. Leeds Smith, Mrs. Astell, and Miss Goodgames, St. Neots.

Fruit classes were very strong and well filled. The collection of eight distinct brought six entries. The first award went to the Earl of Sandwich, Hinchbrook, Huntingdon (gardener, Mr. J. Barson), the Black Maroc Grapes being very fine, Muscat of Alexandria good in berry, but scarcely finished, Sea Eagle Peach good, Nectarines fair, and all other dishes good. The second prize went to Mr. Harsley, Hemel Hempstead (gardener, Mr. Folkes), whose Grapes were very good, excellent Golden Queen and Alnwick Seedling, but his single dishes were poor; third, Captain Duncombe. In the class for six distinct dishes, the first prize went to Col. Shuttleworth, Old Warden Park (gardener, Mr. W. C. Modral). This was a neat, clean, well-set-up exhibit, and far before the others in the class. The second prize went to A. J. Hornill, Esq. (gardener, Mr. T. Lockie); third, G. D. Newton, Esq. For a collection of Apples (very small this season) the awards went to Captain Duncombe, Warsley Park (gardener, Mr. Carter); and second, Mr. Carlile. For two bunches Black Hamburg Grapes; first Mr. Carlile, and second Mr. C. Moore, St. Neots. Any other black, first Mr. Folkes, with excellent Alnwick Seedling; second, Mr. C. Moore, St. Neots. Muscat of Alexandria, first Mr. Barson, with well finished bunches; second, Mr. G. E. Foster. Any other white, first Mr. Folkes, with Golden Queen (good); second, Mr. Barson, with Mrs. Pearson; good bunches but not quite finished. For both inside and outside Peaches Mr. Barson led, and with Nectarines inside and out Mr. Lockie led. The best dish of outside Figs I have seen for a long time was exhibited by Lord de Ramsey, of Ramsey Abbey (gardener, Mr. F. Seabrooke).

Vegetables were extra strong. Sutton and Sons' special prizes went to Mr. Lockie; second, Mr. Folkes. Carter and Sons', first Mr. Folkes; second, Mr. Barson. Webb and Sons', first Mr. Folkes; second, Mr. Barson. Society's prize, first Mr. Barson; second, Mr. Carter. Collection of Potatoes (very strong class), first Mr. Barson; second, Miss Fitzpatrick. Cucumbers were well shown by Mr. Lockie, and Tomatoes made an excellent entry. The first prize went to Mr. Barson, and the second to Mr. Humfries. Many other exhibits were worthy of mention but space will not allow of it.

### Preston Guild, Sept. 3rd.

The great Preston Guild, an event which only takes place every twenty years, is past and gone, and it may be truly said that a more wonderful pageant than that made by the processions could scarcely be realised. Then, too, the visit of the Royal Agricultural Society, with its record entries, in the Moor Park, was a great attraction; the Potatoes and root crops from all the leading seedsmen in the kingdom being amongst the best ever seen.

In the midst of so much variety it is only natural that horticulture should play its part, and with such patrons and lovers of the study as the Mayor and Mayoress (Lord and Lady Derby) the committee were justified in getting together a valuable and interesting exhibition. Tuesday night's storm had displaced some of the canvas, but by the time of staging no fault could be found, the three large marquees being filled with a really fine display of flowers, fruits, and vegetables.

One missed the familiar face of the late Mr. W. Troughton, but his son filled the breach, and with Mr. E. Payne, as secretary, the work was well carried out. There were three classes for groups arranged for effect, that for 300 square feet going to Mr. Troughton. Palms and Ferns formed a special feature in that for 200 square feet, also won by Mr. Troughton. The leading prize for the amateurs' group was accorded to Mr.



W. Haynes, gardener to Mrs. Calvert, with a most tasteful arrangement: Mr. J. B. Dixon following with excellent material not so well put up.

Preston contains many good collections of British Ferns. The six from Mr. J. B. Dixon, and three from Mr. J. Ashworth rivalled many of the exotics. For six exotic Ferns, six foliage and flowering plants, one Tree Fern, and three Dracænas, Mr. J. B. Dixon showed capital plants. Mr. C. Parker, an Orchid authority, won for the best Orchid in bloom.

For six dishes of fruit, his Muscat of Alexandria and Black Hamburg Grapes, Peaches, Figs, Nectarines, and Melons made Mr. B. Ashton, gardener to the Earl of Lathom, a very good winner. The leading awards for Melons were won by Mr. J. W. Wearing, gardener to C. R. Brown, Esq., Windsor Castle variety being extra good. Mr. Ashton also won with six dishes of hardy fruits, and a superb dish of Cherries. Apple, Plum, and Pear classes went to Messrs. Guy, J. Smith, and J. Garside.

Cut flowers were magnificent. The table of 150 square feet from Mr. Troughton contained some brilliantly coloured Dahlias, Phloxes, Gladioli, Sweet Peas, Lilliums, &c. The arrangement was complete in every sense. Beautiful Orchids formed the cut flower prize won by Mr. C. Parker. Bouquets in choice variety were staged by Messrs. W. N. Wood, P. W. Heyes, and G. Morley.

All praise must be accorded Mr. B. Ashton for his superbly grown vegetables, for he won in the collections for twelve and six varieties.

Messrs. Little and Ballantyne, Carlisle, had Roses, herbaceous cut flowers, &c.; Mr. W. Bulman, Blackburn, Carnations; Mr. W. Shand, Lancaster, border flowers; Mr. J. O. Walker, Alpines, &c.; Mr. J. Saul, Pyrethrums; Mr. Titterington, Violas, Roses, Begonias; Mr. T. R. Hayes, Keswick, had splendid hardy Heath; and Mr. H. Middlehurst, Liverpool, Sweet Peas.

In the presence of a distinguished company Lady Derby, who was accompanied by Lord Derby, distributed the medals—two Gold Guild Medals, to Mr. W. Troughton; two to Mr. B. Ashton; and one each to Messrs. J. B. Dixon, R. Moss, H. Winwood, W. N. Wood, and H. Dewhurst. As the best exhibit in the show Mr. W. Troughton's winning group made him the recipient of a Silver Banksian Medal.—R. P. R.

## Royal Caledonian Horticultural, Sept. 10th and 11th.

(By Telegraph.)

The Edinburgh autumn show of garden produce, held under the ægis of this society in the Waverley Market, is recognised as being one of the leading exhibitions of its kind in the United Kingdom. The Council and promoters of it, must, on the present occasion, feel very well satisfied at having a display so large and excellent. The entries, we learn from Mr. Murray Thomson, the secretary, are very numerous, showing a total of 2,440 from 305 exhibitors. There are 221 competitors with collections of fruit and Grapes; 163 for small fruits; 411 for Apples; 96 for Pears; 124 for hardy small fruit; 217 for plants; 440 for cut flowers (groups are a leading feature); and the respectable total of 482 for vegetables. Add to these the amateurs' entries which number 195, and 91 competitive entries from nurserymen, and a fair idea of the extent and keenness of the contests may be obtained. One hundred and twenty-five of last year's exhibitors have not contributed to-day, but curiously true, there are 125 new exhibitors.

In all departments the exhibition equals, and in some features surpasses, those of recent years, in spite of the poor summer and recent storms. The whole area of the Market is crowded, and the sight beautiful and impressive. The fruit competition, of course, is the great feature of the show, the display being large, and the interest keen.

For a decorated dessert table, there are four competitors, all highly creditable. Mr. Dawes, Ledbury, gains first prize for fruit portion, with 93½ points out of a possible 127; Mr. Kidd, of Carberry Towers, Musselburgh, comes second with 93 points. The latter is again first for the decorated table (second not found), and Mr. Dawes, a good third. The latter, however, comes to the forefront for a collection of ten dishes of fruit, Mr. Murray, of Culzean, following as second.

The premier award for six bunches of Grapes is ably captured by that champion culturist, Mr. T. Lunt, of Keir, his lot being exceptionally fine. Messrs. Buchanan Bros., of Kippen, come second. For four bunches, the Buchanan Bros. lead, and Mr. Day, of Garlieston, makes a good second. This southern grower has beaten Mr. Kidd for Muscats; while for Black Hamburgs the Keir chief is again in the van. Mr. Fairbairn, of Alloa, is second.

For a collection of hardy fruits, Mr. Dawes succeeds to the premier place, with Mr. Binnie, of North Berwick, second; while for orchard house fruit Mr. Beisant leads off, followed by Mr. Dawes. A southern gardener—Mr. McKinley, of Amptill—is

accorded first for a collection of Pears, Dawes and Day taking the honours in this order for a collection of Apples.

In the plant division the quality of the exhibits is good, but not extensive. Mr. Knight, of Lenzie, wrested the first prize from the hands of Mr. George Wood of Oswald House, Edinburgh, for a group of plants. Mr. Sharp, of Freeland, well known as an orchidist, takes leading honours with these plants; while Lunt stages the best specimen foliage plants.

There is a large and very handsome display of cut flowers in all sections, Roses, curiously for the season, taking precedence. The nurserymen furnish a keen competition of these, Messrs. Cocker, of Aberdeen, taking first place for a collection of them; and second, Messrs. D. and W. Croll, Dundee. The first award for the three dozen Roses goes to Mr. Hugh Dickson, of Belfast, who can show late in the season as well as early. Messrs. Croll and Alexander Dickson and Sons, of Newtownards, are second and third; while for the eighteen we have Messrs. Dickson and Sons, first; and D. and W. Croll, second. For the dozen, Ferguson, of Dunfermline, has the best. Mr. Parlange, of Helensburgh, and Mr. M. Todd, Musselburgh, are accorded leading honours for Roses in the gardeners' classes.

Mr. M. Campbell, of High Blantyre, carried away the primary awards for Dahlias and Carnations, thus maintaining his good records as a florist.

The vegetables are clean and meritorious on the whole, the leading award in this section going south to Mr. Gibson, the Scottish gardener to R. W. Hudson, Esq., of Danesfield, Great Marlow, Bucks. His Cauliflowers, Onions, Carrots, and Turnips were perfect models. That grower of repute from Dollar, to wit, Mr. Waldie, is a good second.

### Non-competitive Exhibits.

Two groups come from Messrs. R. B. Laird and Sons, Ltd., of the Pinkhill Nurseries, Murrayfield, one consisting of a large collection of Conifers grown at their own nurseries, and embracing a great variety of ornamental kinds. The other group covered 600 square feet, and consisted chiefly of Lilliums—auratum, Harrisii, and lancifolium, with the beautiful Verbena Miss Willmott beneath, and graceful Dracænas, Crotons, and Caladiums, of each of which the firm has a choice and well-grown collection.

Messrs. Sutton and Sons, from Reading, hold a leading place among trade firms who are exhibiting. Their various popular strains of flowers are here included, and among vegetables they have splendid Onions, Carrots, and Tomatoes.

An exhibit of beautifully trained and tended pot fruit trees is forward from Messrs. Thomas Rivers and Son, of Sawbridgeworth, Herts. They stage Peaches, Pears, Grapes, Plums, and other subjects, the group attracting considerable public attention.

Mr. John Forbes, of Hawick, had a splendid exhibit of his now well-known herbaceous and hardy border plants, amongst which were some magnificent Phloxes in large variety. There were also a grand lot of well grown Pentstemons, with very fine spikes, bearing enormous circular flowers of every shade of colour. The newest and best Cactus Dahlias were also represented in very fine form. Carnations were also well staged in vases, and single blooms (nearly 300 of the latter), representing all the sections, were in themselves a feature of the exhibit.

The Kelso firm of Messrs. Laing and Mather contributes Carnations, including Sir Waldie Griffiths, Duchess of Roxburghe, and other novelties, all artistically displayed.

Mr. John Downie, of Edinburgh, has a table of Begonias; while Thomas Methven and Son, also of Edinburgh, have a group of plants.

Amongst those showing herbaceous flowers in variety and quality are Messrs. Dobbie and Co., Rothesay (who also have Dahlias, Marigolds, &c., Cocker and Son; Lister, of Rothesay; and Irvine, of Jedburgh. Messrs. Storrie and Storrie, from near Dundee, send their beautiful Celosia pyramidalis, and Begonias.

Messrs. Cunningham and Fraser, of Comely Bank nurseries, have an exhibit; and new Grapes of merit come from Buchanan Bros. Messrs. Thomson and Sons, of Clovenfords Vineries, Galashiels, are also forward with choice sample bunches from their Grape Vines. Mr. Hayes, of Keswick, has a beautiful table of hardy Heath.

### Awards.

Gold medals were accorded to Messrs. Rivers and Son, and R. B. Laird and Son, Ltd.

Silver-gilt medals to Messrs. Sutton and Sons; Thos. Methven and Sons; R. B. Laird and Sons, Ltd. (for Conifers); Dobbie and Co., Rothesay; and Cocker and Sons, Aberdeen.

Silver medals to Messrs. Laing and Mather, Kelso; D. and W. Buchanan; Storrie and Storrie; Cunningham, Fraser and Co.; and J. Phillips, Granton Road.

Small silver medals to Messrs. John Forbes, Hawick; and John Downie.

Bronze medals to Mr. Chas. Irvine, Jedburgh; A. Lister and Son, Rothesay; M. Campbell, Blantyre; and Hayes, of Keswick.

Cultural certificates were awarded to Messrs. Wm. Thomson and Sons, Ltd., Clovenfords; and D. Maclean, Raith, Kirkcaldy.



### Fruit Forcing.

**CUCUMBERS.**—The temperature should be maintained at 65deg by night, and 70deg to 75deg by day, with a rise to 85deg or 90deg from sun heat. Remove unhealthy leaves and old growths, and training the others as may be necessary. Employ the syringe sparingly, only damping the foliage on bright days, so that it may become dry before night. Damping will require to be done in the morning and again in the afternoon. Pot seedlings as they become fit, and keep them near the glass to insure sturdy growth, pinching out the growing point of those required for covering low trellises at the second rough leaf, others train with a single stem, securing to a small stick, rubbing off the laterals to the extent of the stem required to reach the trellis. Be sparing with moisture to plants in pits and frames, maintaining the temperature by linings renovated as required, closing early, and employing a covering over the lights on cold nights.

**PEACHES AND NECTARINES.**—**EARLY FORCED HOUSES.**—The leaves being off, or nearly so, complete rest should be aimed at by keeping the ventilators open constantly, and if the roof-lights be moveable they may be withdrawn for a time. This prevents undue excitement of the buds, and has an invigorating tendency, as the trees get thoroughly cleansed of dirt, red spider and thrips, and frosts prove destructive of brown scale, while the borders become thoroughly moistened by the autumn rains. If the roof lights cannot be removed see that there is no deficiency of water at the roots of the trees, for though the impression prevails that dryness at the roots accelerates ripening of the wood, it is fatal to the proper formation of the buds, and often gives them a check, causing them to fall later on. The soil should never be allowed to become dry at any time, but a much lessened supply of water will suffice when at rest than during growth. When the leaves have fallen the trees may be pruned. Only the strong growths that have not the points well matured need be cut back. In all cases be careful to shorten to a wood bud, not being deceived by a double or triple bud, as these are all sometimes blossom buds, especially on trees of a floriferous habit, induced through a somewhat stunted growth. Where ordinary attention has been given to disbudding, laying in no more wood than is necessary for the succeeding year's fruiting and for the extension of the trees, also removing fruited and other necessary parts after the fruit has been gathered, very little pruning will be required. Thoroughly cleanse the house, and if the trees have been infested with red or other insect pests dress them with an insecticide, as many, especially red spider, will secrete in the rough portions of the bark and on the woodwork, applying the dressings with a brush. If the trees have been badly infested repeat the application before they are secured to the trellis. Remove the mulching or loose surface soil, and supply fresh loam, having a handful of some approved fertiliser sprinkled over the surface. This will be washed in either by rains or watering, and sustain the trees at blossoming time and the early stages of the fruit swelling. Partial lifting of weakly trees will be necessary, and should be done before the leaves have fallen. In the case of trees that do not ripen wood well, the roots should be carefully lifted and relaid in fresh soil near the surface. If the drainage be defective it should be rectified, and where the trees are altogether unsatisfactory lift bodily and replant in properly prepared borders.

**SUCCESSIONAL HOUSES.**—In these, where the crops were ripened in June, the leaves will soon be cast, and the trees and houses should be treated similarly to those earliest forced. Trees that ripened their crops in July and August will now have the buds plumped, and the wood being ripe, the roof lights may, if moveable, be removed as soon as the leaves give indication of falling, or towards the close of the month. If the wood does not ripen well keep the house rather close by day when there is sun, and open the ventilators fully at night. Any weakly trees that do not plump the buds may be assisted with liquid manure. Trees from which the fruit has recently been gathered should not be neglected for removing the bearing wood of the current season, ventilating freely, watering inside borders, also outside ones as may be necessary, and occasionally syringing the trees and applying an insecticide, as insects must not be allowed to obtain and retain a hold on the trees.

**LATE HOUSES.**—Trees swelling their fruit will need the borders moist and mulched, and those with the roots in outside borders must not be neglected if dry weather prevail, and if carrying heavy crops liquid manure may be given until the fruit

commences to soften. When all the fruit has been gathered remove the shoots, not being extensions, that have carried the crop, and if the wood is not in a satisfactory condition as to ripening, gentle fire heat, with a circulation of air, will be advisable, especially in the case of late varieties. The midseason kinds will ripen the wood if the season be favourable, but if cold and wet the trees are benefited by gentle warmth and a free circulation of air. This is necessary in cold localities, especially with the very late varieties.

**STRAWBERRIES IN POTS.**—The plants from runners potted in July are making good progress, the earliest having the crowns sufficiently plumped for the detection of those that will not be available for early forcing. Those for this purpose should be separated from the rest and given sufficient space for the foliage in the most favourable position, such as a sunny sheltered one, for maturing the growths. The others also must have the pots wide enough apart to allow of the sun and air having free access to the foliage. The crowns in some cases are numerous, and should be reduced to the central one where large fruits are desired, not deferring it until they have attained to a considerable size, but be attended to as soon as they can be detected, and removed sideways with a bluntly pointed piece of hardwood stick. This will concentrate the vigour in the main crown, and will afford strong flower spikes, and then by selecting the largest and best formed flowers, and carefully fertilising them at the proper time, a crop of large shapely fruits will be insured. Any late runners may yet be potted, and with good attention they will be serviceable for late work in 5-inch pots, and may afford fine fruits and collectively as full a crop as those in larger pots. Worms and weeds are troublesome, also runners. Lime water will expel worms, and weeds and runners can be promptly removed.—**ST. ALBANS.**

### The Kitchen Garden.

**TOMATOES.**—Where it is necessary to move Tomato plants growing under glass by the end of the month, in order to make room for other plants, every endeavour must be made to colour the fruits as much as possible. If growing in pots they may be moved bodily to a warmer structure, and allowed to finish on the plants, gradually reducing the growth and shortening back the leaves. Less water will be required than when the plants were in full growth. Afford adequate moisture, however, to plants in structures where they are still in full growth and setting fruit. Fire heat and plenty of ventilation are both essential to Tomatoes under glass now. Young plants growing on for winter and early spring fruiting must have a position near the glass, as if the growth is otherwise than sturdy the plants will not be satisfactory. With regard to outdoor plants, further profitable extension of the growth is now out of the question, consequently it may be stopped, and any practical aid to furthering the ripening adopted. Fully expose the fruit to plenty of sun and light, and keep the plants dry. This may be effected by placing frame lights in front of the plants, so as to utilise and retain the heat longer than is possible without them. From time to time gather the forwardest and best coloured fruits.

**POTATOES.**—The digging of Potatoes may be general now, especially in view of the great probability of disease spreading owing to the protracted periods of wet weather experienced recently. It is not necessary that Potatoes remain in the ground until fully ripe and the shaws have died down. When the latter show indications of changing colour in the least the tubers may be removed as soon as convenient. It is a good plan to cut off the tops of each row before lifting, leaving enough stem to indicate the precise whereabouts of each root. Should the tops be tainted at all with disease burn them at once. Never allow them to lie about. In lifting spread the tubers on the surface of the soil, and remove immediately tubers touched with disease. It is not desirable to dig up more tubers than can be removed in one day unless the weather is exceptionally fine. Collect the various sizes into separate baskets, hampers, or bags, and convey them under cover. Spread in heaps on a dry floor, and exclude light with dry, clean straw or mats. The size of the heaps is immaterial so long as the Potatoes are stored dry. Should there not be sufficient room in shed, outhouse, or cellar under favourable conditions for keeping the tubers, the next best thing is to clamp them outside, forming fair sized ridges on well-drained ground, covering the tubers well with straw, over which lay a thick covering of soil. To allow of moisture escaping from the heap insert a narrow drain pipe, which may protrude above the covering of the pie.

**CABBAGES.**—The plants from sowings made several weeks ago ought now to be in admirable condition for final planting. The largest and strongest will, no doubt, be found amongst those which have been pricked out to strengthen those possessing good clusters of fibrous roots, but good plants may also be obtained from the seed beds, especially if thin sowing was the rule, or thinning of the seedlings early carried out. Plant moderately thickly in rows, which may be 2ft apart. The plants if placed a foot apart will allow of every other one being removed.



**CELERY.**—Considerable quantities of Celery well advanced in growth, which have been well fed and are thoroughly moist at the roots, may now be finally earthed. When the weather is dry and the plants are dry is the best time. To such rows preliminary earthings will have been given, hence there is nothing superfluous to remove. The leafstalks may, however, be gently drawn together and held loosely with strands of bass or raffia grass. This prevents soil reaching the hearts. Break the soil finely and work it round the plants with the hands, pressing firmly. Form slopes on each side rather steep, so as to drain away the moisture from the plants, an excess of which causes rapid decay at the centre.—EAST KENT.



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

### Plan of a Bothy—Competition.

"Well-wisher" promises a first prize of £3, and the Editor supplies a second prize of £1.

The rules of the competition are as follows:—The plan, drawn to scale, must not exceed 7in broad by 7in deep, and must be clearly defined on stout paper. The plan must provide suitable accommodation for six men, and the cost of the building ought not to exceed £200 to £220. A statement of the general items of cost should accompany the plans, together with any written comments thereon. The competition is open until Christmas, 1902, by which date all plans must be in the hands of the Editor. The sender's name and full address should be enclosed when sending the plan, and the sender will alone be held responsible for it.

**MAKING A LAWN ON SANDY SOIL—INOCULATING VERSUS SOWING** (Kittie).—We assume that the ground has been duly levelled and moved to an even depth, a fine and relatively firm surface secured. In that case the plot may be sown with grass seeds, the sooner the better, and a selection being made of species of grasses suitable for a sandy soil, this matter being named to the seedsman in ordering the mixture, there is no reason why as good or even better lawn should not result, as by inoculating or inserting pieces of turf about 3in square a foot distance apart over it and sowing between. By inoculating about 1-16th of the turf necessary for laying it down at once is required, and in order that the grass, mostly Perennial Rye Grass (*Lolium perenne*), may the more readily spread over the whole surface, the intervals between the inserted pieces should be raked, and not rolled or beaten until the patches meet, which they will likely do about midsummer. By sowing now the grasses would obtain a fair hold before winter, and even if lifted by frost they would roll down again and form a good lawn by the early part of the summer, not being cut too close or too early in the spring, but keeping well rolled.

**MELONS DISEASED** (F. G. D.).—The leaves are affected by Melon spot fungus, *Cercospora melonis*, which is very prevalent this season, not only on Melons, but on Cucumbers, market growers suffering very severely, the malady taking the shape of an epidemic and preventing full crops from being secured, indeed, not half a crop being secured on the second batch of plants, it not attacking the early ones, seldom appearing before the turn of the days after midsummer, when the night dews become heavier and the morning moisture is longer in being dispersed. The roots are quite sound, and though the stems give some indication when cut through of sleeping disease, we failed to discover any destruction of the vascular bundles or mycelia therein, and though the parts became slightly brown, as in attack by *Fusarium*, there was nothing of a determinate nature. The slight cankerous affection at the collar yielded the mycelial hyphæ of some fungus, but there was no connection between it and the vascular bundles, as is the case in attacks of *Fusarium* in the production of the early form, or *Diplocladium*. Probably more air and a drier atmosphere would arrest the fungus on the leaves, but this is so decisive as to prevent further progress in the plants and fruit.

**"BUSINESS ILLUSTRATED"** (Ever Anxious).—This publication is obtainable through the ordinary sources, i.e., the booksellers and newsagents. The address of the publishing office is 44-47, Bishopsgate Without, London, E.C. It is published every alternate month, price 1s. per copy, or free by post 1s. 4d. You would certainly find it interesting and useful.

**TOP-DRESSING CHRYSANTHEMUMS** (Cambridge).—You cannot do better than top-dress your plants at once, which will assist in keeping the roots active and supplying the plants with the necessary food to enable them to develop their flower buds. It is surprising what assistance a top-dressing of rich material proves to the plants in their latter stages, after the roots inside the pots have taken full possession of the whole of the soil. A system of top-dressing is practised by the majority of those who grow large flowers for exhibition. You will find equal parts of good fibry loam and cow manure with a little soot, say a 6in potful to half a bushel of soil, an excellent top-dressing for your plants, and the roots will not be long before they take possession of it. Some first-rate cultivators top-dress their plants with cow manure only, but we prefer the compost advised above.

**YOUNG VINES** (An Amateur).—It is difficult for us to say why the berries of your Grapes are small from the information supplied to us. The size both of the bunches and berries depends in a very large measure upon the growth the Vines made last year, and also upon the condition of the wood, whether thoroughly ripened or not. It is impossible to expect Vines with unripened wood that possesses neither strength nor vigour, whether young or old, to produce berries of a large size. Young Vines very frequently produce large-sized bunches, but the berries are often smaller than from vigorous Vines of a greater age. This is not always the case, for much can be done in swelling the berries to a large size by good cultivation, which under inferior treatment would only be small. The pruning would have nothing to do with the size of the berries. You cannot expect us to answer your other question about the soil, for you have not said one word whether you made special preparations for your Vines, or in what compost they are growing. If your letter had been less brief we might probably have given you a more useful answer.

**ROOT-PRUNING** (F. J.).—You had better not prune the trees till the crop is gathered, which you say will be in October. The remarks on root-pruning in September are, as you intimate, sound and clear, but they apply to fruitless trees of luxuriant growth. Yours, it appears, are not quite fruitless, yet are growing too freely, and you will not err by root-pruning in October, or immediately the fruit is gathered.

**NAMES OF PLANTS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (T. J. R.).—Your number 6 specimen (second batch) last week should have been named *Juniperus virginiana* var., and not *Biota*. We require to see the cones for a nearer identification, (Mid-Sussex).—A splendid specimen of *Polygonum orientale*. (Frank).—*Ercilla* (*Bridgesia*) *spicata*, but a miserable specimen. (Able).—1. *Lonicera hirsuta*; 2. *Aster acris*; 3. *Deutzia crenata* fl.-pl.; 4. *Staphylea pinnata*. (F.).—*Solanum jasminoides*.

**Note to Readers.**—We request those of our readers who may experience any difficulty in obtaining copies of this Journal regularly to be good enough to acquaint us with the fact.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.                              | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|------------------------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|                                    |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                                    |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.<br><br>August and September. |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ...31                       | E.S.E.             | deg. 57.4               | deg. 56.3 | deg. 66.2 | deg. 57.0 | Ins. 0.21   | deg. 61.3                             | deg. 60.7      | deg. 58.4      | deg. 52.0                    |
| Monday ... 1                       | S.E.               | 63.5                    | 62.2      | 71.2      | 56.2      | 0.08        | 61.3                                  | 60.5           | 58.4           | 45.9                         |
| Tuesday ... 2                      | S.W.               | 66.5                    | 62.0      | 69.0      | 50.8      | 0.04        | 61.5                                  | 60.6           | 58.4           | 42.5                         |
| Wednesday ... 3                    | W.S.W.             | 68.5                    | 63.0      | 70.2      | 62.2      | —           | 62.4                                  | 60.7           | 58.4           | 58.2                         |
| Thursday ... 4                     | W.S.W.             | 65.2                    | 58.8      | 76.0      | 54.9      | —           | 62.2                                  | 61.0           | 58.4           | 43.7                         |
| Friday ... 5                       | W.N.W.             | 55.2                    | 54.2      | 67.9      | 51.3      | —           | 61.8                                  | 61.0           | 58.4           | 42.7                         |
| Saturday ... 6                     | N.W.               | 57.7                    | 55.3      | 70.0      | 50.0      | —           | 60.8                                  | 60.8           | 58.4           | 42.0                         |
| MEANS ...                          |                    | 62.0                    | 58.8      | 70.1      | 54.6      | Total. 0.33 | 61.6                                  | 60.8           | 58.4           | 46.7                         |

The first part of the week was dull and wet, the latter part fine and bright. A heavy gale of wind occurred on the 3rd inst.

## Covent Garden Market.—Sept. 10th.

## Average Wholesale Prices.—Fruit.

|                          | s. d. | s. d.  |                           | s. d. | s. d.   |
|--------------------------|-------|--------|---------------------------|-------|---------|
| Apples, English, dessert |       |        | Lemons, Messina, case     | 12 0  | to 20 0 |
| ½-sieve ...              | 4 0   | to 6 0 | "  Naples ...             | 25 0  | 0 0     |
| "  culinary, bush.       | 3 0   | 5 0    | Melons, each ...          | 1 6   | 2 0     |
| Bananas ...              | 8 0   | 12 0   | Nectarines, doz. ...      | 3 0   | 12 0    |
| Figs, green, doz. ...    | 2 0   | 4 0    | Oranges, case ...         | 16 0  | 21 0    |
| Filberts, lb. ...        | 0 3   | 0 4    | Peaches, doz. ...         | 3 0   | 12 0    |
| Grapes, Hamburgh, lb.    | 0 9   | 1 6    | Pears, Williams, ½-sieve  | 4 0   | 6 0     |
| "  Muscat ...            | 2 0   | 3 0    | "  Hazels, ½-sieve...     | 3 0   | 4 0     |
| "  Alicantes ...         | 0 9   | 1 6    | Pines, St. Michael's,     |       |         |
| "  Colman ...            | 0 9   | 1 6    | each ...                  | 2 6   | 5 0     |
| Greengages, ½-sieve ...  | 4 0   | 6 0    | Plums, Victorias, ½-sieve | 0 0   | 4 0     |

## Average Wholesale Prices.—Vegetables.

|                         | s. d. | s. d.  |                          | s. d. | s. d.  |
|-------------------------|-------|--------|--------------------------|-------|--------|
| Artichokes, green, doz. | 2 0   | to 3 0 | Lettuce, Cabbage, doz.   | 0 6   | to 0 9 |
| "  Jerusalem, sieve     | 1 6   | 0 0    | "  Cos, doz. ...         | 0 9   | 1 0    |
| Batavia, doz. ...       | 2 0   | 0 0    | Marrows, doz. ...        | 1 0   | 0 0    |
| Beans, French, lb. ...  | 0 2   | 0 0    | Mint, doz. bun. ...      | 4 0   | 0 0    |
| "  broad ...            | 3 0   | 4 0    | Mushrooms, forced, lb.   | 0 8   | 0 0    |
| "  Scarlet Runners      | 2 0   | 2 6    | Mustard & Cress, pnt.    | 0 2   | 0 0    |
| Beet, red, doz. ...     | 0 6   | 0 0    | Parsley, doz. bnchs. ... | 3 0   | 0 0    |
| Cabbages, tally ...     | 3 0   | 4 0    | Peas, blue, bushel ...   | 3 0   | 4 0    |
| Carrots, new, bun. ...  | 0 2   | 0 3    | Potatoes, English,       |       |        |
| Cauliflowers, doz. ...  | 3 0   | 0 0    | new, cwt. ...            | 5 0   | 6 0    |
| Corn Salad, strike ...  | 1 0   | 1 3    | Radishes, doz. ...       | 1 0   | 0 0    |
| Cucumbers doz. ...      | 2 6   | 4 0    | Spinach, bush. ...       | 2 0   | 3 0    |
| Endive, doz. ...        | 1 6   | 0 0    | Tomatoes, English, lb.   | 0 3   | 0 4    |
| Herbs, bunch ...        | 0 2   | 0 0    | "  Jersey... ...         | 0 0   | 0 3    |
| Horseradish, bunch ...  | 2 6   | 0 0    | Turnips, bnch. ...       | 0 2   | 0 3    |
| Leeks, bunch ...        | 0 1½  | 0 2    |                          |       |        |

## Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                          | s. d. | s. d.   |                            | s. d. | s. d.  |
|--------------------------|-------|---------|----------------------------|-------|--------|
| Aralias, doz. ...        | 5 0   | to 12 0 | Foliage plants, var, each  | 1 0   | to 5 0 |
| Araucaria, doz. ...      | 12 0  | 30 0    | Fuchsias ...               | 0 0   | 0 0    |
| Aspidistra, doz. ...     | 18 0  | 36 0    | Grevilleas, 48's, doz. ... | 5 0   | 0 0    |
| Chrysanthemums ...       | 6 0   | 12 0    | Lycopodiums, doz. ...      | 3 0   | 0 0    |
| Crotons, doz. ...        | 18 0  | 30 0    | Marguerite Daisy, doz.     | 4 0   | 6 0    |
| Cyperus alternifolius    |       |         | Mignonette ...             | 0 0   | 0 0    |
| doz. ...                 | 4 0   | 5 0     | Myrtles, doz. ...          | 6 0   | 9 6    |
| Dracæna, var., doz. ...  | 12 0  | 30 0    | Palms, in var., doz. ...   | 15 0  | 30 0   |
| "  viridis, doz. ...     | 9 0   | 18 0    | "  specimens ...           | 21 0  | 63 0   |
| Ferns, var., doz. ...    | 4 0   | 18 0    | Pandanus Veitchi, 48's,    |       |        |
| "  small, 100 ...        | 10 0  | 16 0    | doz. ...                   | 24 0  | 30 0   |
| Ficus elastica, doz. ... | 9 0   | 12 0    | Shrubs, in pots ...        | 4 0   | 6 0    |

## Average Wholesale Prices.—Cut Flowers

|                           | s. d. | s. d.  |                          | s. d. | s. d.   |
|---------------------------|-------|--------|--------------------------|-------|---------|
| Arums, doz. ...           | 3 0   | to 0 0 | Lily of Valley, 12 bnchs | 12 0  | to 18 0 |
| Asparagus, Fern, bnch.    | 1 0   | 2 0    | Maidenhair Fern, doz.    |       |         |
| Bouvardia, coloured,      |       |        | bnchs. ...               | 4 0   | 5 0     |
| doz. bunches ...          | 6 0   | 0 0    | Marguerites, white,      |       |         |
| Carnations, 12 blooms     | 0 6   | 1 0    | doz. bnchs. ...          | 2 0   | 0 0     |
| Cattleyas, doz. ...       | 0 0   | 12 0   | "  yellow, doz. bnchs.   | 1 0   | 0 0     |
| Cornflower, doz. bun.     | 0 0   | 0 0    | Myrtle, English, per     |       |         |
| Croton foliage, bun. ...  | 0 9   | 1 0    | bunch ...                | 0 6   | 0 0     |
| Cycas leaves, each ...    | 0 9   | 1 6    | Odontoglossums ...       | 4 0   | 0 0     |
| Cypripediums, doz. ...    | 2 0   | 3 0    | Orange blossom, bunch    | 2 0   | 0 0     |
| Eucharis, doz. ...        | 2 0   | 3 0    | Roses, Niphetos, white,  |       |         |
| Gardenias, doz. ...       | 2 0   | 0 0    | doz. ...                 | 1 0   | 1 6     |
| Geranium, scarlet, doz.   |       |        | "  pink, doz. ...        | 2 0   | 0 0     |
| bnchs. ...                | 4 0   | 0 0    | "  yellow, doz. (Perles) | 1 0   | 1 6     |
| Gladiolus, white, doz.    |       |        | "  Generals... ...       | 0 5   | 0 6     |
| bunches ...               | 3 0   | 4 0    | Smilax, bunch ...        | 2 6   | 0 0     |
| Gypsophila, doz. bun.     | 3 0   | 0 0    | Stephanotis, doz. pips   | 1 6   | 2 0     |
| Ivy leaves, doz. bun. ... | 1 6   | 0 0    | Stock, double, white,    |       |         |
| Lilium Harrisi ...        | 2 0   | 3 0    | doz. bun. ...            | 2 0   | 3 0     |
| "  lanceifolium alb.      | 1 6   | 2 0    | Sweet Peas, white and    |       |         |
| "  l. rubrum... ..        | 1 0   | 1 6    | coloured, dozen bun.     | 0 0   | 0 0     |
| "  longiflorum ...        | 2 0   | 3 0    | Tuberoses, dozen... ..   | 0 3   | 0 4     |

## Trade Catalogues Received.

- William Bull and Sons, 536, King's Road, Chelsea, S.W.—*Bulbs*.  
 James Carter and Co., High Holborn, London.—*Bulbs*.  
 Wm. Clibran and Son, Altrincham.—*Carnations, Pinks, Pansies, Violas, &c.*  
 Robert Pringle, The Midland Horticultural Depot, 40, Belvoir Street, Leicester.—*1, Bulbs; 2, Fruit Trees; 3, Roses.*  
 John Russell, Seed Merchant and Nurseryman, Richmond, Surrey.—*Bulbs*.  
 Robert Veitch and Son, Seed Merchants, &c., 54, High Street, Exeter.—*Bulbs*.



## Neglected Forage Plants.

Now that so much importance attaches to the rearing and fattening of cattle and sheep, it is the more necessary that no stone should be left unturned by the British farmer in his efforts to compete successfully with his foreign and colonial rivals. This has been a growing season; ample rains have flushed the pastures, and even made a dreadfully poor seed plant present a passable appearance. But how would it have been if the series of dry summers had not been broken, and this year been as dry as those which preceded it? It must have been most disastrous to breeders and feeders of live stock.

The Clover and Rye Grasses which form the stock in trade of the British flock-master cannot be depended on to grow, or even exist, under the dry conditions which may so readily recur. Last year the Clovers came up amongst the young Corn only to be dried up and perish before they got fair hold of the soil. This year there is an excellent young plant; but we shall not have a satisfactory return from it unless next summer we have sufficient rain.

There are, however, other plants which are so deep rooted that they successfully defy the severest drought, and if farmers would make freer use of these plants when making their seed mixtures they would not only grow heavier crops of forage, either for cutting or grazing, but be independent of the vagaries of British weather.

We have in mind four plants, but it is to three of them that we wish to draw particular attention. The fourth is Lucerne, and we have dealt especially with it on a previous occasion. Lucerne is, moreover, in our opinion, less suitable for mixture with other plants than the other three we shall name. It is more useful for small plots, where a certain quantity of green food is required for mowing every day for a lengthened period.

The first we mention is Chicory. This is a very deep rooting plant, and most remarkable for withstanding drought. It is more suitable for three or four years' ley than for shorter periods, as the roots are somewhat troublesome to eradicate. If sown by itself, 12lb to 16lb of seed per acre are required. The larger quantity on the drier soils. It grows well amongst Barley, Oats, or Wheat. It is too succulent to make hay of, but is splendid as a producer of green fodder.

The late Mr. Arthur Young, whose MSS. on the "Science and Practice of Agriculture" are now in the British Museum, was a great advocate of the cultivation of Chicory. He grew in four years 119 tons of green fodder per acre, or close upon 30 tons per acre per annum. At another time 62 tons of green produce was cut by him in one year. Chicory is readily eaten by horses, cattle, calves, and sheep. Very good cream and butter are produced from it. Mr. Young says in his book, "On all poor lands it is of the highest consequence, having no rival. On the very worst soils it is beneficial to sheep, and I may venture to assert that in such a full stock of sheep cannot be kept without it."

Chicory should be cut at rather short intervals, four times a year being better than three, which is the general practice with Lucerne. When it is desired to seed down poor sandy lands for a number of years, no mixture of seeds would be complete without a proportion of Chicory. It wears a long time, a good quantity having been found ten years after it was sown.

The next plant is Burnet. This also is a deep rooting, drought resisting plant, though Chicory is said to be superior in that respect. It is not suitable for mowing, as cattle do not eat it well when it is in bent. It is most useful to form part of the mixture for sheep pasture on dry sandy soils, which are most favourable to its growth. When sown by itself, 20lb to 30lb per acre, broadcast, would be needed; but 6lb to 8lb per acre, with other seeds, we should prefer.



When sown in a mixture, sheep eat it down closely, and thrive well on it. It grows early, and is ready for grazing by the beginning of March, which is an important advantage to sheep breeders, as it provides fresh food when it is most urgently required. Burnet is a most healthy food for sheep, and has the excellent quality of correcting scour. As we have said, it is not so suitable for hay as some other plants; but a portion of Burnet amongst hay will prevent the latter from over-heating.

Another little known, but very valuable, plant is the Kidney Vetch. A few years ago Mr. Hunter Pringle called attention to the great value of this plant as grown on the poor sands of Norfolk and Suffolk. Personal experience confirmed the correctness of Mr. Pringle's statements. It will flourish where Clover can hardly exist. We have grazed it and made hay of it, but should recommend it as a companion to Burnet for sheep pasturage. It will stand for years if the winters be mild; but 30deg of frost will kill off old plants. Young plants will stand frost well. Twenty pounds per acre is the proper quantity to sow alone; but, as with Chicory and Burnet, we should recommend a mixture.

For a five or six years' ley on thin or sandy soil, 4lb White Clover, 8lb Burnet, 6lb Chicory, 8lb Kidney Vetch, 4lb Rib Grass, and the Rye Grass which does best in the soil (say 7lb of it), would make an excellent mixture, and could be relied on to keep growing and provide a good bite when ordinary everyday mixtures would be dried up and dead.

### Work on the Home Farm.

Grass land farmers have gone through very sad experiences during the last year or two, but they are getting their own again now. They rejoice in full pastures and good markets for their fat stock, and at the same time see their arable brethren wallowing in a slough of despond produced by a succession of showers just when sunshine is the only thing desired. After two seasons of too much sunshine and too little moisture, it is very disheartening to farmers to find themselves hampered by the opposite extreme, but so it is, and we have to make the best of it.

To-day we have a tearing wind, and as only a small portion of the Corn is in stook, we are naturally fearful as to its effects on the standing crops. Barleys of the Standwell and Goldthorpe type are very largely grown, and being very liable to neck in a wind, a gale like this may cause heavy loss. The best ears of Barley we have seen this year are Wrench's Prolific, a variety of Chevalier with both length of ear and plumpness of grain. The grains near the tip of the ear are as big as those in the middle, a most desirable feature.

Reapers are working well considering the difficulties they have to contend with. Wheat is easy enough to do, but some of the Barley which became lodged in June is so rotten that it is pulled up by the fingers before the knife has a chance to do its work. The best way is to put men to work with scythes and mow out all the bad bits. If this rubbishy stuff is tied up at once and stooked by itself it may be kept apart altogether from the better portion of the crop, with great benefit to the latter.

Barley is cutting and stooking up well, and the samples will be of good size, though they are considerably stained. Oats are disappointing. In the majority of cases their appearance in stook compares badly with their appearance uncut. Samples will be good and heavy. With fine weather new Oats will soon be on the market. Prices are tempting, and farmers want money. They also want thatch, so it is likely that heavy thrashings of Wheat will take place shortly.

It is a long time since farm live stock showed such a clean bill of health. The loss of lambs has been of the smallest proportions, and these animals are, in point of growth and condition, far above the average. Plenty of food accounts for good condition, and good condition is the best safeguard from disease. Sheep will have to go on Turnips shortly, but it will be convenient to get the harvest in first. There will be plenty of young Clover in the stubble, but Turnips are so good that we shall hardly require to graze new seeds this autumn. They will be better for being untouched until spring.

Milk cows have enjoyed such good pasture that they have kept up the milk supply in very unusual fashion. That the quality has not kept pace with the quantity is proved by the numerous prosecutions of dairy farmers for selling weak milk. Cows will pay as well for cake when pastures are good as when they are sparse. Though there is still plenty of grass, it cannot be of summer quality, and cotton cake must be allowed. Foals must soon be weaned, especially if the mares are required for harvest work. Unweaned foals are often thrown amiss when their dams are working. Reaping should especially be avoided. For early lambs the ram should now be with the ewes. There is increasing tendency to use black-faced sires, and with the wool trade in its present state no sensible man would do otherwise.

## Australian Grazing Lands and Grasses.

The excellent character of Australian dairy and other food produce generally, is largely due to the rich character of the greater portion of the grazing lands, especially in the vicinity of the sea coast, where the rainfall is most frequent and copious. In New South Wales, the Illawarra district, famous for its cheese and butter, possesses some of the best pasturage in the Commonwealth, consisting of different kinds of herbage in varying proportions. In newly laid down pastures, says an agricultural expert, Perennial Rye predominates, but the reason is that a greater percentage of seeds of this Grass is generally sown in mixture for permanent pasture. Cocksfoot form a fair percentage of the permanent herbage, and appears to withstand dry weather better than Rye. White Clover is also abundant, more particularly in pastures which have been laid down a few years. Under ordinary conditions it produces an abundance of seed, and when the autumn rains set in they readily germinate. During the spring months, should rain fall at frequent intervals, the Clover grows rank, and when cows eat ravenously of it very frequently produces hoven. With this exception, the Illawarra dairymen look upon it as a valuable pasture plant.

Prairie Grass is conspicuous in most pastures, the rich, succulent herbage being much relished by stock. Rib-Grass is plentiful, and is regarded as an excellent food for cows, and as increasing the flow of milk in dairy cattle that eat it. Among the useless Grasses, from a dairyman's point of view, is the "meadow soft grass," or "Yorkshire fog," said to have been introduced with Cocksfoot seed into New Zealand. In both new and old pastures, but especially the latter, there is a considerable percentage of indigenous grasses and plants, and in dry seasons these, more particularly the Couch Grass, often prove the mainstay of the pastures, the native grasses being enabled to withstand the effects of drought for a longer period than are the artificially-sown grasses.

In the New England district of New South Wales some of the grazing lands are among the finest known, and during the summer months are unsurpassed for the rich, succulent, and varied character of the indigenous grasses and forage plants which clothe them. One of the most common "grasses" is the "Wild Sorghum," which is highly spoken of. Not only are sheep and cattle, we are told, fond of the herbage, but it is said that horses eat the seed heads and fatten on them. "Kangaroo Grass" is plentiful, and grows to a great height when left unmolested. "Wallaby Grass" is common in places, and has a high reputation as a forage plant, by reason of its drought-resisting properties. The "blue grass" is also a valuable herbage plant. The herbage likewise includes the "tussack poa," "star" or "windmill grass," and "wheat grass."

The "Bent Grasses" are common; although only annual grasses, they yield rich, succulent herbage during the early summer months, when most other grasses are in the earlier stages of growth. The "long hair Plume Grass," when in flower, is a conspicuous plant on pastures. On the banks of some creeks and in low damp places the "water Couch Grass" is plentiful. It is a quick grower, and greedily eaten by cattle. There are numerous other native grasses which afford excellent food for live stock.

Among the exotic grasses the white Clover is, perhaps, the most abundant, growing more freely than in colder countries, the New England pastures in spring being literally white with its flowers. In the Camden district, near Sydney, when first settled, the tall, waving "Kangaroo Grass" was so plentiful that when in seed the country resembled an immense Wheat field. The grasses are much the same as in the New England district. Noxious weeds and supposed poisonous plants are found on many of the Australian grazing lands, but in most places are kept in check by stock owners.

The commonest weeds are a couple of so-called Dandelions, which, although not productive of ill-effects in live stock, naturally tend to diminish the quantity of useful herbage by choking out the nutritious grasses. At one time the "Cape Weed" threatened to become a destructive pest, but it is being kept within bounds, as are the Thistles and Dock plants.

The rapidly increasing importance of the Australian dairying industry has occasioned greater attention being given to the maintenance and improvement of the pasture lands generally, with the result that their feeding and fattening capabilities have become largely extended. The growth of the more useful indigenous grasses is encouraged, and where artificial sowing is necessary the best kinds of grass seed from Europe and America alone are used. Considerable quantities of grass seed, both indigenous and exotic, are also obtained within the Commonwealth.—JOHN PLUMMER, Sydney.

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**DUCHESS OF WESTMINSTER**, an exquisite flower, and one of the best of the Leedsii section; perianth clear silvery white, and cup opening a delicate primrose, flushed rose, but passing off white. Extra Strong Selected Bulbs — 53/- 7/6

**EMPEROR**, a grand Trumpet Daffodil, well deserving its name Emperor, on account of its very large, rich, full yellow flowers and stately bearing, very free blooming; prized for cutting. Strong Flowering Bulbs .. 45/- 10/6 1/6  
Extra Large Bulbs .. 120/- 13/6 1/10

**EMPRESS**, a charming companion plant to Emperor; the flowers are large, chaste, and beautiful, and of great substance, with rich golden-yellow trumpet and bold snowy white perianth. Strong Flowering Bulbs .. 110/- 12/6 1/9  
Extra Large Bulbs .. 140/- 15/- 2/3

**GRAND DUCHESS**, a very beautiful early-flowering Leedsii, with elegant silvery white flowers, having cup stained apricot-orange; greatly prized for cutting. Extra Strong Bulbs .. 45/- 6/-

**GRANDIS**, a very handsome late Trumpet Daffodil, with large bold flowers; petals snowy white, large, and broad, and of great substance; trumpet large and full yellow; it blooms when all other Bicolors are over, is an ideal bedder, and its noble flowers for cutting are greatly appreciated. Strong Flowering Bulbs .. 95/- 10/6 1/6  
Extra Large Bulbs .. 120/- 13/6 1/10

**MRS. LANGTRY**, a dainty silvery Chalice-cupped Daffodil of the Leedsii group, having the white cup elegantly margined golden yellow, a characteristic and novel as it is beautiful; one of the freest bloomers and a favorite for bouquets, buttonholes, and vases. Strong Flowering Bulbs .. 145/- 13/- 2/3  
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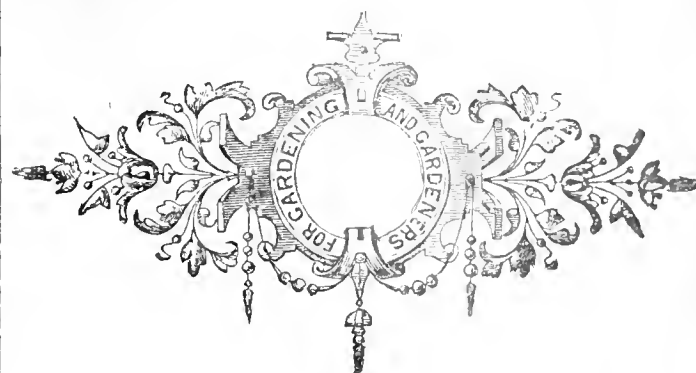
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## Journal of Horticulture.

THURSDAY, SEPTEMBER 18, 1902.

### The "Home" Bulb.

THE greatly increased number of bulbous plants now used, I shall not say cultivated, in gardens, for in most cases they are purchased ready to produce flowers, makes it a matter of some importance to know where to go for bulbs. Holland, for centuries, has enjoyed the pleasure and profit of supplying Great Britain with her bulbs, not because they could not be as well produced on this side of the sea, as because it has hardly ever occurred to anyone to give the same attention to their wants as have the Dutch. No one thinks now of going to Holland or France for fruit trees; yet, at one period, these two countries possessed a settled trade in young trees. Nor do we send to the Continent for our highest class seeds, knowing that our own seed growers possess superior strains. The sole reason why British-grown fruit trees and seeds are better than those we can purchase on the Continent, is to be found in the greater care taken in the production of each, and we willingly conclude to pay a largely enhanced price for the superior article.

So prejudiced, however, has been the feeling in favour of Continental bulbs, that, if not at the present time, or certainly not many years ago, market growers were accustomed to send their forced bulbs to be grown on in Holland, till they had recovered strength to flower again as well as previously. At present, enormous quantities, particularly of Daffodils, are cultivated even in Scotland, and, after three or four years growing in fields, are again ready for forcing. I have pursued a like practice during many years, and stock of some sorts has increased to such an extent, that enormous quantities of the more prolific sorts have been, from time to time, thrown out for want of room, and the

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better kinds have been employed without a shadow of expense in planting up grassy glades.

I have never attempted the production of Tulips for forcing, but a gardening friend whose soil suited Tulips to perfection, forced home-grown bulbs during many years, and with great success. Forced Hyacinths, too, after gaining strength, though as good spikes as the generality one purchases, and much superior to the cheap bulbs so common wherever one goes. I might proceed to show that Spanish and English Irises from seeds are as easily produced as Potatoes, and the same with most other hardy bulbs, but I do not wish to indulge in too many subjects at one time. The question that more particularly engages my attention is how results such as I have hinted at can be secured. The answer is a very simple one. Merely to cultivate them with as much care as we give to any other subject we decide to succeed with. I have seen potfuls of forced bulbs huddled together into the ground, one potful close to another. It is plain, treatment of that nature is not of a kind to produce superior bulbs. Rather they must decrease in vigour, and end in complete failure. But, on the other hand, plant in good soil thoroughly cultivated, allowing each bulb sufficient space for the development of its foliage and its progeny for the next three years, not forgetting each spring to apply something extra—soot, rich soil, rotted muck, or mineral manures, and with the ordinary attention due to all crops, the result will be bulbs to be proud of, and flowers a joy and source of rejoicing.

There is still a wider phase of this question, that it may be not amiss to touch on just at present. That is, whether home growers for sale are competent to produce as satisfactory bulbs as the foreigners. I think there is no question but that they are. Continental bulbs may have the advantage in forcing more easily, but in other respects they have none that cannot be equalled by the home production. New Daffodils alone will form a big trade in the future, and it has been shown in the case of home-grown bulbs of new varieties that these are equal to those of Continental growth. Nothing could be better, for instance, than the behaviour of the Engleheart varieties distributed last year. Novelties derived direct from the Continent, as well as others in commerce, were not of finer quality.

But if the home grower is to keep up his sales, he must also keep up the quality of his bulbs. I saw an instance last spring of a piece of wild gardening absolutely spoilt by the inferior quality of bulbs, of which, I am sure, not over 5 per cent. produced a single bloom, while Continental stuff bought at the same price yielded on an average about 250 blooms to a hundred bulbs. Policy of this kind is bad, not only for the party interested, but it cannot miss injuring trade growers as a whole. The same unhappy way of conducting business has occurred in the case of home-grown bulbs of Fritillarias, Scillas, bulbous Irises, &c., which, had to be cultivated a year before they were sufficiently strong to bloom. Whether it is a desire to keep the best bulbs for growing in his own grounds that induces a tradesman to send out an inferior article I cannot say, but to compete with the foreigner at equal prices the best must be sold and the less good grown at home. The question during late years has assumed dimensions of some importance, and I am acquainted with many workingmen amateurs, and those higher in the social scale, who annually make bulb purchases directly from the Continent, and they have no interest except they believe they get thence the better article, for, at the same time, flower and vegetable seeds are purchased, regardless of price, so long as they are assured of their high quality, from home seedsmen.—R. P. BROTHERSTON.

### IRIS BUCKARICA.

A new species named and described by Sir Michael Foster, F.R.S., and native of Eastern Bokhara, on mountain slopes at an altitude of 5,000 to 6,000ft, and on the sides of river Sureh-ab, a tributary of the Amu Darya. It was discovered by a collector of the firm of Messrs. Van Tubergen. Miss Willmott, of Warley Place, Great Warley, exhibited a specimen before the Floral Committee of the Royal Horticultural Society on the 8th of April last, and was accorded a First Class Certificate. *Iris Buckarica* resembles *I. orchoides* in many respects, the points of difference being in the flower. It has fleshy stems, and the shining, linear, succulent foliage is luxuriant below the terminal flowers. The recurving tips of the blades are deep sulphury yellow, the petaloid stigmas and the claw being white and conspicuous. The "standards" are reduced to mere flimsy bracts. Its culture, no

doubt, is identical with that of other bulbous Irises. Irises succeed in sandy loams, well enriched, and in sunny, sheltered positions. They are also grown in pans for spring flowering. The illustration on page 261 is from a drawing by Mr. Geo. Shayler.

### New Daffodils.

Scarcely has the foliage of the Daffodil disappeared when new catalogues arrive, raising hopes and exciting desires that must perforce remain unsatisfied. Many exquisite varieties, however, can now be obtained at a small outlay. The newer sorts are beyond the reach of ordinary means. "Many men, many minds," may be rendered, and we may say, "Many men, many floral tastes." The Daffodil, with its beautiful form and robe of golden sheen or virginal purity, cannot but be a general favourite. So, when one was told by a veteran florist in the foremost files of the day that he hated Daffodils, the expression was assigned its true value. No doubt the modest *Auricula* has insinuated herself into the sanctum of his affections, and the gaudier *Carnation* and winning *Picotee* guard the inner court, but in the outer there is room for every flower that blooms. The sweet *Auricula* appeals to the taste of comparatively few, and to many who attempt its culture the *Carnation* in its finer forms is a lovely nuisance. But, as the French have it—*chaque à son goût*—each one to his taste.

The past season was a record one for the Daffodil. The development was slow, never were the flowers larger or of better quality, and the period of bloom was unusually prolonged. Emperor was uncommonly good, nearly one-third larger than usual, and of exquisite finish; M. J. Berkeley and Maximus in extra intensity of colour; Grandis of perfect purity; and Mrs. Camm rivalled Madame de Graaff in all but form. So one might maunder through his moderate collection in the fond delusion that what gave him so much pleasure must necessarily be of interest to others. To the writer, the event of the season was the annual visit to Valleyfield, Penicuik. To Mr. Cowan the ordinary Daffodil lover in Scotland is indebted for a feast he could not otherwise enjoy. Prompt to the eagerly-awaited intimation that the Daffs were on at Valleyfield, a trio of friends were on the spot. In addition to a cordial greeting from Mr. Cowan they were saluted by a great fanfare of golden trumpets, and thousands of fair heads nodded welcome. There is no need to refer to this great general collection. All varieties were there that are worth growing.

The prominent new sorts may be glanced at, these including a large number of the Rev. Mr. Engleheart's seedlings. Leading the way at the head of the big battalions came Lord Roberts, a striking Daffodil worthy of its illustrious name, with fine stiff, massive, golden perianth, and great frilled trumpet. Catalogued at £21 it is, and likely will long continue to be a flower for the privileged few. Golden Bell is well named, the large trumpet seeming almost luminous; Siren, a pretty flower with long white trumpet; Florence, a fine white, and Galatea, a smaller refined white trumpet, were specially noticeable. Among the cupped varieties of high merit were Ariadne, with spreading cup, very slightly tinged with lemon; Waterwitch, a fine white bloom like an improved Beatrice; and Torch, whose bright orange and scarlet cup is very attractive. As on former visits, the Goliaths of the race were interviewed—Monarch, Shakespeare, Weardale Perfection, Duke of Bedford, and others. Queen Wilhelmina and Hodsock's Pride were not then quite expanded.

A supplement to these was presented at the subsequent spring show in Edinburgh, where a table of Daffodils from Valleyfield formed a supreme attraction. Among others, one there noted Sol, a great yellow trumpet; Maggie May, a very beautiful Leeds, with pure white perianth and pale citron cup nicely frilled; and King Alfred a golden self trumpet, if not the largest, in refinement of colour and perfection of symmetry peerless among Daffodils. Lovers of this flower are grateful to Mr. Cowan for an opportunity of seeing these and such rare varieties.

The removal of this great collection to new quarters where they will be free from the polluting breath of well-known extensive works, must entail immense labour on Mr. Pirie, Mr. Cowan's able gardener, but will result in enhanced pleasure to its owner in the unsullied purity of his favourite flower.—A NORTHERN AMATEUR.

## Commercial Bulb Culture.

The development of commercial bulb culture in the United Kingdom has received an enormous impetus during the past forty years, and especially during the last half of that period. During the first decade of the last half of the last century bulb culture was carried on in this country on a very restricted scale. Lincolnshire and Cambridgeshire supplied large quantities of yellow Crocuses and double Snowdrops. Many of the Surrey, Middlesex, and Kent market gardeners, who grew the common double Daffodil for bunching for market, would dispose of their surplus bulbs to some of the London wholesale seed houses. Ixias and Sparaxes were obtained from Guernsey, but the great bulk of the bulbs sold in this country were obtained from Holland, France, and elsewhere.

Since then a huge industry in the form of bulb culture has grown up in this country, consequent upon the popularising of the Daffodil. A very important step in this direction was taken when, some thirty years or so ago, Mr. J. G. Baker classified the then existing varieties of Daffodils by dividing them into three main sections—the magni-coronati, the medio-coronati, and the parvi-coronati. Mr. Barr was exhibiting the best varieties then in cultivation, and chief among the first-named section were Emperor, Empress, and Horsfieldi. He also hunted up hitherto unknown varieties. He fired many with a desire to cultivate, and some he prevailed upon to attempt the task of adding to the then known varieties by means of cross-fertilisation. On May 2, 1877, Mr. Peter Barr exhibited at an exhibition held by the Royal Horticultural Society at South Kensington (which her late Majesty Queen Victoria opened) a collection of Daffodils, to which the Large Silver Gilt medal of the Society was awarded. This venture had the effect of drawing public attention to the beauty of the flower, and some far-seeing men to its value for commercial purposes. One result was to enhance the usefulness of the Daffodil for decorative purposes, and the acknowledged utility of the flower in this direction induced many to cultivate for this purpose, and also to supply bulbs for sale in a dry state.

The huge industry which has sprung up in the Scilly Islands is well known, and in spring tons upon tons of cut blooms are sent from thence to London and other parts, which become distributed throughout the country. From the South of France and along the shores of the Mediterranean, and from other sources abroad, come enormous quantities of bloom, and of some varieties which cannot be so successfully cultivated in the more temperate climate of the United Kingdom.

Bulb farms, some of them on an extensive scale, have been formed in different parts of the country, at Spalding in Lincolnshire, and at Wisbech in Cambridgeshire, in particular. I am by no means to be understood as stating that

these two counties have a monopoly of Daffodil culture, but Spalding has certainly become a great centre of the bulb industry. The Daffodil appears to be more suited to our English soil than any other popular spring flowering bulb, as it will do well in any good loam, even if somewhat heavy.

The Hyacinth, the Tulip, with the Crocus, needs, in order to bring the bulbs to perfection, a lighter and more sandy soil than the Daffodil, and that is the main reason why we depend so much upon Holland for a supply of these subjects, but look at home for our Daffodils. In Ireland, on the sandy shores of the Bay of Dublin, and elsewhere, Messrs. Hogg and Robertson cultivate Tulips with great success, as shown by a field of their Keizerskroon on

page 268. At Cork Mr. W. Baylor Hartland grows Daffodils to a considerable extent, while at Lismore, Co. Cork, on the banks of the Blackwater, Miss F. Curry has built up an interesting Daffodil industry, and furnishes to Daffodil exhibitions flowers of very fine quality. If the cultivation of the Hyacinth, the Tulip, and the Crocus is to become a national industry, then I think Ireland may furnish the most suitable localities for its prosecution.

At Spalding and Wisbech in particular the Daffodil, as already stated, is most extensively cultivated, and it is possible to see in the season beds of two hundred and three hundred thousand of a single variety. Those who send cut flowers to market gather them when a little more than half open; they are then taken into a house heated at a high temperature, in which the flowers become fully expanded while perfectly pure, which they would not be if fully exposed to the elements in the open. They are then removed to the open air and stood in vessels of water to stiffen the petals, and the blooms are then bunched and packed for market. There may be modifications of this practice as a result of the teaching of experience, but generally the procedure followed is that set forth. The flowering bulbs are lifted in July, or as soon as ready, sorted, and stored for sale. The strong bulbs are planted in September, or about that time, in well prepared beds; the offsets planted in nursery beds, where they remain for two or three years, until they have grown into flowering size.

(See Messrs. Bath's illustration on page 275.)

Those who grow for cut bloom find certain varieties best suited for the purpose, and grow them, as already indicated, in large quantities. But such find it necessary to add new varieties to their lists from time to time. Those who cultivate bulbs for sale must, of course, keep their collections up to date by adding expensive varieties, in order to be able to compete at Daffodil exhibitions, or exhibit collections of the leading varieties, as well as supply orders when sufficient stock is available. New varieties come from distinct crosses. The Rev. G. H. Engleheart is the premier raiser of the day. Some are imported; others are found in gardens, and of late years collections have had important additions made to them from such sources.

Time was when the Anemone and the Ranunculus, though

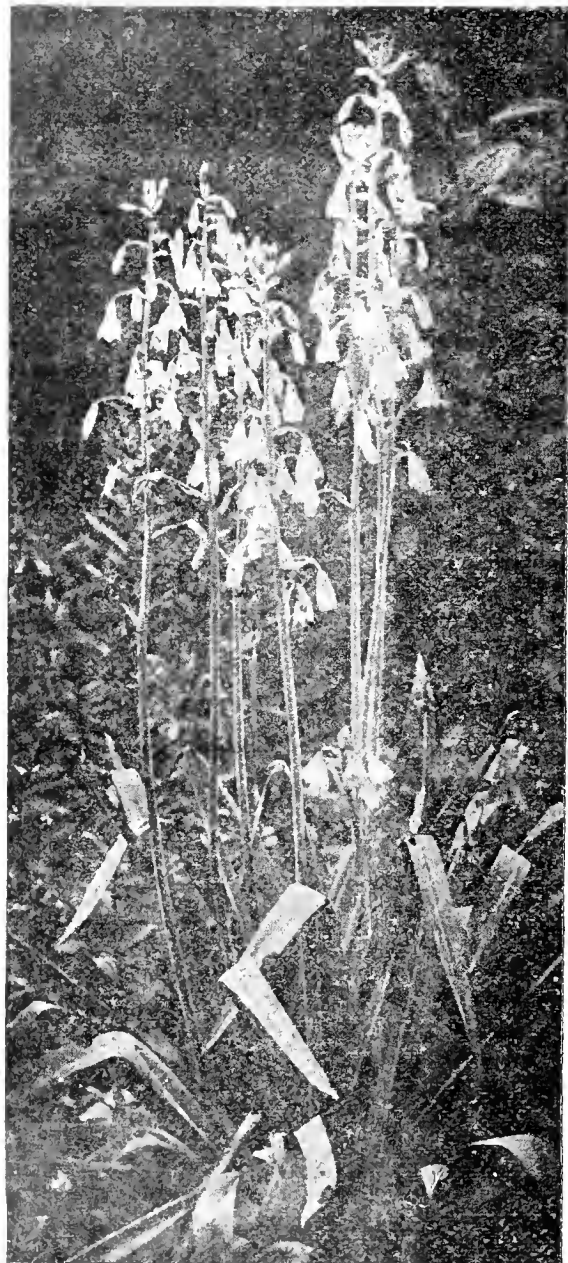


**Iris Buckarica.**

(See page 260.)



not strictly bulbous plants, and the Winter Aconite also, were largely grown in this country. We have recently turned our attention to Ireland, and found there the finest strains of Anemones. The Ranunculus, practically a neglected plant, is now but little grown. We import Ixias and Sparaxes from Guernsey and a few other subjects, which are grown only to a limited extent. The Roman Hyacinth comes from abroad; so do the early Gladioli. But the Daffodil is now essentially an English flower, and there is every probability that the bulb industry of our own country, and especially so far as it relates to the Daffodil, will grow rather than diminish in the years to come.—  
RICHARD DEAN, V.M.H.



*Galtonia candicans.*

## GALTONIA CANDICANS.

This stately compeer and meet associate for scarlet Gladioli in beds or borders, will be known to some of our readers as *Hyacinthus candicans*. It is a splendid bulbous plant, and one which has for many years been employed in larger beds, these containing Gladioli, as we say, and Kniphofias and similar flowers. It flowers during July, August and September, the beautiful, scented, drooping white flowers shooting erectly to 4ft high. The illustration, kindly lent by Messrs. Dicksons, Ltd., Chester, affords an accurate impression of its character. The bulbs are as easy to cultivate as either Hyacinths or Kniphofias; indeed, what suits these, will also answer for Galtonia. The plants are easily increased by detaching the offsets from the bulbs in September or October, and replanting.

## The Forms of the Narcissus.

It is a common circumstance that all novelties, the result of the hybridist, must show changes of form, perhaps in one distinct line, perhaps in many, as in the present instance, so that either as natural hybrids picked up by the explorer after rarities, or the production of the stay-at-home manipulator, there is now a wonderful diversity of form among Narcissi. Form, indeed, has for some years appreciably marked the status of many sorts.

The true Narcissus or Daffodil of old England was undoubtedly *N. poeticus*, to which the name of *parvi-coronatus* has been given in Mr. Baker's monograph of 1869. This section is not represented in any of the cuts on the opposite page, but is well known by its flattened white petals and its tiny cup. The finest forms at present in commerce comprise *ernatus* and *recurvus*, the old-fashioned Pheasant's Eye. Both sorts require high culture. It is deliciously scented. *Grandiflorus* and *Almira* are newer sorts, the last-named the more promising of the two. The double poeticus derived from Constantinople three centuries ago is, when in good form, exactly like the top bloom of Golden Phoenix (see figure). It was asserted and finally proved by Mr. Barr to be a form of *patellaris*. It, like the others, affects high culture. It has been named the *Gardenia Narcissus*, but the old English name, Sweet Nancy, is much prettier.

In the same group is *N. biflorus*, a supposed natural hybrid between a poeticus and *N. polyanthus* or a Tazetta. The bloom is primrose coloured and inexpressibly sweet. *N. Tazetta*, also derived from Constantinople, is best known as the species that provides the charming *Soleil d'Or*, *Grand Monarque*, &c., the lovely Paper White and The Pearl, which, I believe, was long grown on the Scilly Islands as the Scilly White.

The *Burbidgei* section is the result of a cross between *N. poeticus* and *N. incomparabilis*. There is not a cut of this either, but the flowers are round, rather small, with the perianth either white or yellow, and the cup small, varied in colour. The one I like best is *Vairessa*, but *Bareness Heath* and *John Bain* may also be grown. They are capital for cutting. I have purposely referred to these first, because amongst them we have the oldest, the prettiest, the sweetest, and the easiest cultivated forms.

The *Magni-Coronati* section, of which the English Daffodil is the commonest, contains the most magnificent forms. They are the old Bastard Daffodils or pseudo-Narcissi. Henry Irving comes very near the type, but with the trumpet enlarged. In many places the true pseudo fails to bloom satisfactorily, but generally *N. obvallaris* succeeds, *Golden Spur*, *Glory of Leiden*, *Shakespeare*, *Emperor*, *Maximus* (see plate), *I. B. Berkeley*, and *Prince Alfred*, are each excellent. Of the lovely bicolor forms the more desirable are *Horsfieldi*, *Grandee*, *Weardale Perfection*. Among the wholly white or sulphur tinted varieties, *N. Albicans*, *Mrs. Thomson*, and *Madame de Graaff* should be certainly grown, *Pallidus præcox* where it will grow, and *Princess Ida*, a most charming variety, and good doer.

*N. Johnstoni* Queen of Spain belongs to this section, and *Santa Maria* a very early kind. The *Swan Neck* or *W. Goldring* has drooping flowers of much the same form. Then there are *Minimus*, *Minor*, and *Nanus*, all three dwarfs. Double forms of this group, *Telamonius plenus*, and *Capax plenus*.

The group between the last and the first is called *Medio-coronati*, and is remarkable for the large number of hybrid forms of which it is mainly composed. Of these the most beautiful is certainly the *Incomparabilis* section, and of these the finest is *Sir Watkin*, a variety with a queer modern history, but an old English flower, supposed to be the "Great Nonpareille" of Parkinson. *White Queen* is an expensive pure white, reckoned by connoisseurs the finest of this type, and *Brigadier* and *Lady Margaret Bescaven* are other grand forms. *Gloria Mundi*, *Stella Superba*, *C. I. Blackhouse*, *Queen Sophia*, *Red Star*, and *Lulworth Beauty* also deserve special notice.

There are three double forms in this section, of which the most beautiful is *Sulphur Crown*. The plant is too tender to do well except in a warm position. *Codlins and Cream* is the quaint common name of this form.

Of the *Leedsii* section are a few that cannot be denied a place in the most contracted of gardens. Such a one is *Mrs. Langtry*, here portrayed. In every respect it is exquisite. Some people, however, prefer *Minnie Hume*, and *Duchess of Westminster* ought to be added. Some of the *Barri* section are almost equally charming, especially *Barri conspicuus*, *Flora Wilson*, the *New Sea Gull*, and *Albatross*. In addition I would crave a little room to draw attention to the little Rush Daffodil, *N. Jenquilla*, the *Campernelle Jonquil*, *N. odoratus*.

The forms of *N. triandrus* are of exquisite beauty, and *N. cyclamineus* should certainly find a place on account of the recurved flowers.

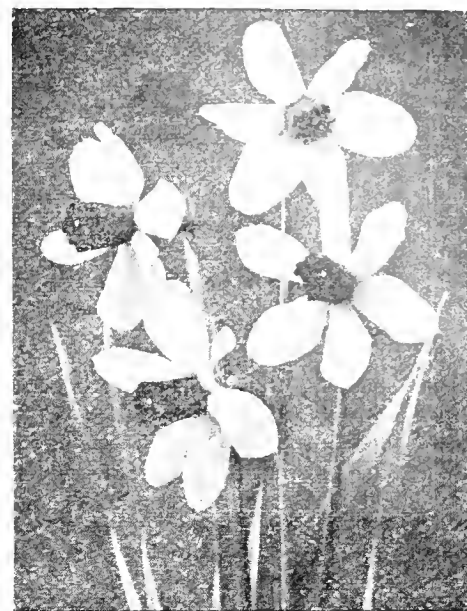
I have to apologise for neglecting *Nelsoni Major*, the best of a section so called after an old raiser of Daffodils. The *Hoop Petticoat* (*N. Bulbocodium*), and some others do not succeed in the open, but they are certainly worth the trouble of growing in pots, planting the bulbs quite close together.—R.



Copyright S. & S.  
Narcissus, Queen of Spain.



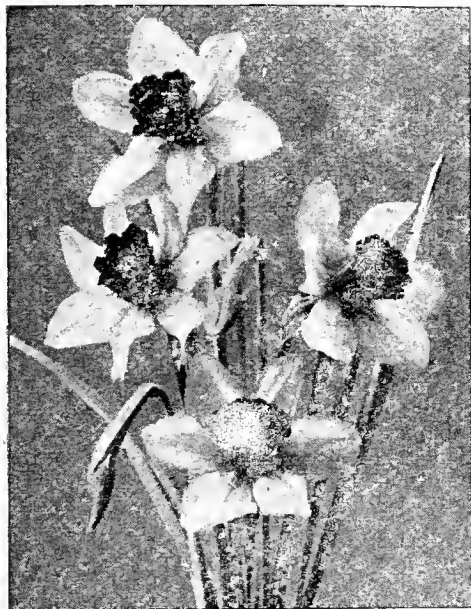
Copyright S. & S.  
Narcissus, Stella Superba.



Copyright S. & S.  
Narcissus, Nelsoni Major.

### FORMS OF THE NARCISSUS.

*These illustrations and the accompanying article are intended to attract attention to the classification of the forms of flowers in this genus, but a scientific, systematic treatment being undesirable here, the matter is presented in readable form. Messrs. Sutton's illustrations on this page are referred to in the article by "R.," who separately deals with the three main Groups (1, magni-; 2, medio-; and 3, parvi-coronati) of the Narcissus, and the sub-groups Barri, Leedsii, Burbidgei, &c. Useful up-to-date guides on this subject are some of the Daffodil catalogues.*



Copyright S. & S.  
Narcissus, Sir Watkin.



Copyright S. & S.  
Narcissus, Impd. Golden Phoenix.



Copyright S. & S.  
Narcissus, Trumpet Maximus.



Copyright S. & S.  
Narcissus, Mrs. Langtry.



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Narcissus, Henry Irving.





*Muscari conicum* var. Heavenly Blue.

## Naturalising Bulbs in Grass.

Year by year the practice of planting bulbs in grass finds more favour with plant lovers, and at the present time vast quantities of bulbs are used for that purpose. That the practice should increase in popularity cannot be wondered at, for a sweep of grass land dotted over with Daffodils, Pheasant-eye Narcissus, or other bulbs is infinitely more beautiful than a square, round, or any other shaped bed crammed with bulbs of one particular sort. Planted in the grass, each plant stands clear of its neighbour, or groups with it in a natural manner, whilst planted in a bed all the plants are jammed together, and the form of any individual specimen cannot be seen.

The selection of suitable positions for various sorts of bulbs should be given attention when plantations are being made, for on this the success of the undertaking depends to a great extent. For instance, in places where the grass has to be mown fairly early, those bulbs only should be planted whose foliage dies naturally at an early date, for no leaves should be cut off until they turn yellow; then again notice must be taken of whether the grass forms a thick turf or whether it is somewhat scarce, for in many places such things as Snowdrops and Chionodoxas quickly deteriorate when planted under a thick, dense turf, whilst planted under trees where the grass is fairly thin they increase in vigour.

Then, again, the sizes of the masses must be given consideration, for while in some cases extensive sweeps would be desirable, in others small colonies only would be better fitted. At Kew some very pretty effects are made by planting clumps of Daffodils on the outskirts of Rhododendron bushes, and this is a plan which could be readily adopted by those who have a few bulbs only to plant. In other parts of the gardens at Kew large expanses, an acre or more in extent, are planted, and these in their position make a fine display, but are by no means more beautiful than the small colonies among the Rhododendrons.

The planting of the bulbs should also be carefully managed, for nothing looks worse than quantities of bulbs planted in grass in a formal manner. Straight lines and circles should be avoided, an irregular outline being aimed at. Then when planting a large mass, the bulbs should not all be used in the mass, a number being left to scatter about the outskirts either singly or in small clusters. In the mass itself it might also be found desirable to leave a patch here and there without bulbs, so that when in flower a large group may be relieved here and there with patches of green. Of all exotic bulbs, possibly Daffodils are the best for naturalisation, as they will thrive under very adverse conditions, and are suitable for a great number of positions.

In addition to the common Daffodil, however, there are a number of species of Narcissus and a great many varieties which are first rate subjects for the purpose, whilst spring and autumn Crocuses are extremely useful, especially in places where the grass has to be mown early. Snowdrops and Chionodoxas are better fitted for planting under trees where the grass is thin than for planting in thick grass, though for two years, especially if the ground is good, they may be depended on to flower well even in thick grass.

In some cases Tulips and Hyacinths have been planted in grass and make nice patches of colour for a few years. A few species of Tulip naturalise, and these might be more often used than at present. The practice of saving all bulbs which have not been subjected to very severe forcing, is carried out in many places, and all these are planted out either separately or as a mixture. The majority of these flower the following year, and the greater portion improve in condition, especially if the ground is good.

The planting of bulbs in grass is a rather tedious operation,

especially where large quantities are dealt with. Numerous ways of planting may be adopted, any of which are satisfactory. Two methods which are practised at Kew with success are, firstly, the making of holes 3in or 4in deep with a crowbar, and secondly, removing patches of turf, digging up the ground, placing in the bulbs and covering them over with the turf. For the commoner kinds of bulbs the former method answers well, but for the rarer kinds it is advisable to adopt the latter plan. When planting under the first-mentioned manner it is a good plan to drop a little fine soil into the holes before the bulbs, afterwards filling the holes up with good soil.

For making new plantations, no time is better than the present, as the bulbs will begin to root at once, and they may be looked for to make a good display next spring. Until choice, expensive bulbs have been well tested in cultivated ground, it is not advisable to plant them in grass, for if they should not come up to expectations the planter would probably be discouraged from trying other things.

Almost all the old, well tried varieties of Narcissus are suitable things, whilst others previously mentioned are also suitable. The large flowered Bluebell, *Scilla hispanica*, is worth introducing into the woodland, either used alone or mixed with the common one. On the outskirts of woods *Lilium Martagon* is worthy a trial; in places where the ground is not very hard the Winter Aeonite is a useful subject, the hardy *Ornithogalums* and several *Alliums* may be used by those who like variety, and numbers of other things of which large quantities are obtainable.

—W. DALLIMORE.

## "A GOOD SAMPLE."

The title above applies to the exhibit of a handsome potful of Hyacinths which, through Messrs. Webb and Sons' (Stourbridge) goodness, we are able to present on this page. The variety is Webb's Golden Perfection, and there can be no better proof of the high quality of the bulbs and the attention of the cultivator than that photograph. The fragrance of springtime, and a vision of bright colours in greenhouse and hall, is borne to us in viewing it. Good yellow Hyacinths are not at all common, and this variety is a beautiful bright yellow.

## MUSCARI CONICUM var. HEAVENLY BLUE.

We desire to bring to the notice of any who may not have a stock of it, a plant of such merit that it has only to be seen to be duly appreciated. Messrs. Barr and Sons, of King Street, Covent Garden, London, have a hedge-bank at their Long Ditton nurseries covered with it, and when the flowers are at their best, and they persist a long while too, the display made is specially remembered by all who have seen it. For the small illustration of this subject we are indebted to the Messrs. Barr. Heavenly Blue was sent to them some years ago from Trebizond; the colour is of the brightest and richest shade of gentian-blue imaginable, and large masses produce a wonderful effect in the garden from the end of March to May; the flowers have a delightful fragrance, and are very valuable for cutting, having long stalks, and remaining fresh in water a long time. It was awarded a Certificate of Merit by the Royal Botanic Society.



"A Good Sample."

# NOTES & NOTICES

**Mr. G. Fulford.**

This able gardener, who has been for five years at Presdales, Ware, Herts, relinquishes his situation there on the 27th inst. Mr. Fulford has many prizes from horticultural exhibitions as a testimony to his skill. In an August number we figured the Rose garden at Presdales.

## To Readers and Correspondents.

A number of letters for the Readers' Views page have, of necessity to be held over for a week, and the same remark applies to Correspondents' queries. Our fuller report of the Edinburgh show, of which we had a very short telegraphic report last week, came to us on Wednesday, our printing morning, but our special number this week went some hours earlier to press, and a racy and interesting report is thus held for one week longer. It will appear in our next.

## Weather at Hamilton, N.B.

This morning the thermometer registered 5deg of frost. It was not unexpected, for the last few days were abnormally cold for the month, a north and east wind blowing intermittently. The effects of the frost are already showing themselves, Dahlias, Perillas, Dwarf Beans, and many other things are hanging black in the comparatively hot sunshine which supervened. I have not yet been able to discover what damage, if any, the frost has done to the half ripened cereals in the district.—D. C., Hamilton, September 13.

## A Remarkable Harvest Feat.

Stradbroke, in Suffolk, has been the scene of a remarkable harvest feat. A local farmer the other day carted a field of Wheat during the morning, threshed it in the afternoon, sold and delivered it to a local miller early in the evening. The miller ran some through his mill, and within four-and-twenty hours of the Wheat being taken from the field in which it had grown he had sold flour that had been manufactured from it. This is probably a record in such an unfavourable harvest season as at present.

## Proposed Vegetable Exhibition.

The Council of the Royal Horticultural Society have consented to set apart one of their fortnightly meetings at the James Street Drill Hall, Westminster, next autumn, for an exhibition of high-class vegetables. The Council will not offer prizes; hence the promoters are compelled to invite the kind co-operation of the seed trade. There will be ample space in the present Drill Hall, not only for such classes as are intended, but also round the sides for collections of choice vegetables, within rigidly prescribed limits, exhibited by firms contributing prizes. Such collections should greatly help to create a remarkably representative display of vegetables. As the Council's arrangements for the ensuing year are now in course of preparation, and in which publication all vegetable prizes and classes will be inserted, the promoters, Edwin Beckett, Aldenham House Gardens, Elstree, and Alexander Dean, Hon. Sec., 62, Richmond Road, Kingston-on-Thames, ask to be acquainted of donations or prizes by intending contributors, so soon as possible.

## A Collection of Wild Flowers.

In its report of the recent flower show at Reading, the "Berkshire Chronicle" said: "A word of special praise is due to Mr. George Stanton, the talented gardener at Park Place, Henley, for his group of wild flowers of Berkshire, with their botanical names and their common designations attached. There were some 200 species, all more or less excellent in bloom, which enabled them to be seen to advantage. It may be easily imagined that it took Mr. Stanton no little time and trouble to collect the flowers and name them, and spoke well for his botanical knowledge, and also for the variety and profuseness of wild flowers in the county. Such an exhibit of this character has not been made for twenty years, when Mr. Stanton did the same thing. This is to be regretted, as the exhibit has a good educational value." Similar exhibits, representing the commoner flowers of other counties, might well form an educational feature at shows in different parts of the kingdom.

## Appointments.

Mr. Herbert Hall, for the past five years head gardener at Queenwood, Chertsey, as head gardener to W. H. Herbert, Esq., Newnham House, Wallingford. \* \* Mr. J. Marwood, as head gardener to P. N. Graham, Esq., Northanger, Godalming, Surrey, in succession to Mr. Thos. Glassey.

## Chrysanthemums.

The plants in pots need now considerable attention in watering and feeding. When the pots are fairly full of roots and the soil begins to dry give a copious watering. Liquid manure may be given to those plants which have set their buds. It will suit the plants best if various solutions are given at alternate times so as not to surfeit them with one thing. Liquid made from cow, sheep, or horse droppings at the rate of a peck of manure to 30gals of water is a safe solution. Vary with soot water, and slight top-dressings of artificial manure. Give stimulants only when the soil is moist, not when dust dry.

## An Habitually Fasciated Lily.

The remarkably prolific specimen of *Lilium auratum* which for some years now, has attracted florists and photographers from all parts to view it, has once more burst into bloom in Levensgrove Park, Dumbarton. Last year the blooms upon it numbered 270, but this year that number has been exceeded, and the blooms total over 300. It is now seven years since the bulb was planted. From the first it showed such a wonderful vitality and display of flower as to attract the public attention. The curator of Levensgrove Park has taken the precaution to erect a canvas shelter over the specimen to protect it from the stormy weather now prevalent. For the next ten days or so it is anticipated that hundreds of visitors, from far and near, will visit the park in order to view this magnificent specimen of the Lily tribe.

## August Weather at Belvoir Castle.

The prevailing direction of the wind was W.—total, eight days. The total rainfall was 5.00in; this fell on twenty-one days, and is 2.34in above the average for the month; the greatest daily fall was 1.44in on the 6th. Barometer (corrected and reduced: highest reading 30.208in on the 1st at 9 a.m.; lowest reading 29.597in on the 18th at 9 p.m. Thermometers: Highest in the shade 72deg on the 16th; lowest 38deg on the 26th; mean of daily maxima, 63.93deg; mean of daily minima, 49.03deg; mean temperature of the month, 56.48deg; lowest on the grass, 35deg on the 26th; highest in the sun, 125deg on the 4th, 13th, and 24th; mean temperature of the earth at 3ft, 56.87deg. Total sunshine, 101 hours 20 minutes, which is 64 hours 22 minutes below the average for the month. There were six sunless days. In the three days, August 5, 6, and 7, we had a total of 3in of rain. Such a heavy fall has not been recorded here in August since 1876. Previous to that the records are imperfect. The temperature has been exceedingly low for August, with a great deficiency of sunshine.—W. H. DIVERS, Belvoir Castle Gardens, Grantham.

## The Favourite Carnations.

An English writer in an American contemporary names some of the prize-winning varieties of Carnations as noted in the past summer at English shows. He continues: "The classes for the best blooms in certain stated tints of colour served to show the flowers most prized in this country. Much the Miller and Mrs. Eric Hambro', both white, took the first and second positions in the class for blush or white selfs. In that for rose or pink, a charming new variety named Mrs. G. Sebright, soft pink, was first, and Bomba, rosy pink, was second. Scarlet, red or crimson flowers had as their leaders H. J. Cutbush, a brilliant scarlet; The Sirdar, rich crimson, was second. Sir Bevy was the best maroon; purple selfs were included, but those which are really good are very scarce. It was curious to note that though several new yellow selfs have been introduced since Benary, of Erfurt, sent out his Germania, now some years ago, it was the only yellow self which won a prize in this class. In the class for a buff self, Mr. M. R. Smith's delicate salmon buff-like Germania took all the prizes. The best self flower picked from the whole show was Mrs. G. Sebright: its tint of soft pink is delightful, and its shape very good. We also have the Carnation presented to us in various ways for table decoration, but the blooms employed need to be carefully selected and not be generally too large. Still, the Mahanison type can be employed with admirable effect when properly manipulated."





Trumpet Daffodil, Peter Barr

## Crocuses for Spring Time.

And at their feet the Crocus brake like fire.—Tenny on.

NONE of us who love our flowers can think of the Crocus or hear the sound of its name without a sense of exhilaration. Especially is this so at a season when we are feeling the coming of winter and are thinking of its long and almost flowerless days in the garden. It only needs the mention of the name to transport us, in thought at least, to the spring days when the Crocus opens to the sun and glows with that brilliancy no other flower can give so freely. And now when we are committing to the soil these little fleshy corms which enshrine the life of the flower we feel a double share of this spirit of joy; for are we not sowing in hope to reap in joy the reward of our forethought? We think almost exultingly of the spirelets of colour which shall by-and-by appear through the grass on the dark earth, and which, at the magic call of sunshine, shall open into a brilliant display, whether in disorderly array, in formal lines or beds, or simply in clumps in the border's space. In "cohorts of purple and gold," in masses of almost purest white, in sheets of more ornate striped flowers, the Crocus comes as a welcome sight to all whenever it blooms.

Though not invariably a flower of spring—for we have the Crocus with us as a rule from September's beginning—it is yet indissolubly associated in our minds with that glad season, when we feel the truth of Lord Lytton's words:—

And the Crocus upturned its flame, and burned  
Here and there.  
"The summer," she said, "cometh blithe and bold,  
And the Crocus is fit for her welcoming."

It is then that we enjoy it the most, for it is then that we have the greatest variety of its kind, and it is in the glad spring time that we have it in its most gorgeous forms as seen in the Golden Yellow Crocus and the many lovely garden varieties of *C. vernus*. These are the most gorgeous of the race, and they generally possess, besides the signs of art and choice of the florist in the development and form of the flowers and in their varied colours and markings. Thus, although not the earliest in time of blooming, we may take these first in order.

The most welcome of all the Crocuses of the spring is the Golden Yellow, apparently derived from *Crocus aureus*, but of unknown origin, and easily distinguished from all other known varieties of *C. aureus* by the grey lines on the exterior of the petals. How many generations of gardeners in other countries

it has delighted we know not, but Gerard speaks of it as having "floures of a most perfect shining yellow colour, seeming afar off to be a hot glowing coal of fire," and as having been sent to him by "Robinus, of Paris, that painful and most curious searcher of simples." Since Gerard's day this Yellow Crocus has been a prized flower wherever spring flowers are grown. The earliest of the Crocuses generally grown, it is also an indispensable one, though often past its best before the purple and other coloured varieties we desire to associate with it are in full bloom.

Next to it come the varieties of *Crocus vernus*, and these it is almost impossible, and absolutely needless, to detail. Whether we take the purple, the white, or the parti-coloured varieties we can hardly go wrong among them, and the connoisseur will desire to possess them all. Some of the whites are not so pure as one would like, and hardly any are free from at least faint lines of colour in the interior of the flower, but all are lovely. Of the whites I prefer Mont Blanc, Snow Queen, and one of the newest named Honorine Joubert—a decided acquisition to this class. Of purples, perhaps the deepest coloured is Queen of Purples, but David Rizzio and King of the Blues are also good varieties, while the nearest to an azure blue is given by Bleu Celeste. L'Unique has small purple flowers. It is not so easy to choose among the striped flowers, but Sir Walter Scott, Madame Mina, Pride of Albion, and the new Harlequin, which, however, is variable, are all worth growing. Ne Plus Ultra, which has purple blossoms tipped with white, is indispensable, and Margot is a lovely flower with the inside of the segments coloured a soft lavender, and the outer petals shaded with white.

All of these should be planted in generous masses, and are lovely when seen in irregular masses in the grass. A wealthy man who would plant some millions on a sunny hillside would deserve well of all flower lovers if the place could be seen by all passers. Such a sight would be worth going many miles to see.

But these Dutch varieties of *C. vernus* do not nearly exhaust the Crocuses of spring time, and there are too many other species and their varieties for me to detail in the space the editor has placed at my command. An arbitrary division places among the winter bloomers some which may well be permitted a place among our flowers of the winsome season. There is the lovely *C. Imperati*, one of the earliest and most charming with its violet-purple flowers, fawn coloured outside, and generally feathered with black on this ground. There are many varieties of *C. biflorus*, which, with its best-known forms, *argenteus*, *pusillus*, *estriatus*, and *Weldenii*, ought to be in every garden for the sake of their charming odorous flowers.

Then there is the quaint old Susianus, the Cloth of Gold Crocus, striped brown outside and opening out starlike to show its golden internal colouring. The delightful early Sieberi gives betimes its bright purple flowers, and the typical aureus with its rather numerous varieties is beautiful early in spring as well. With it may be grown *C. stellaris*, as starry as Susianus, and orange with purple-brown featherings; while in the charming little *C. Tommassinianus* we have a free-flowering and hardy little Crocus, pale lavender in type, but variable in its varieties. Then the prolific *C. vernus* has given us such flowers for the elect Crocus lover as George Maw, Leedsii, Ira Aldridge, the pretty *leucorhynchus*—the Pheasant's Feather—and several more. Space fails to tell of the lovely *candidus*, *reticulatus*, *versicolor*, *gargaricus*, *Banaticus*, *Malyi*, and a number more which are welcomed annually with delight when they in the garden do appear.

As for their culture it is of the easiest. Some recommend just covering with soil, but I prefer to plant about 2in deep. Whenever grown, plant them closely together if immediate effect is desired, and with liberal numbers there will, in their season, be full enjoyment of the "Crocuses of the spring time."—S. ARNOTT.

## TRUMPET DAFFODIL, PETER BARR.

Undoubtedly this is the finest white Daffodil or Narcissus at present in commerce, having a pale, sulphury trumpet and ivory-white perianth. It is longer in the crown than Madame de Graaff, and rather less revolute at the brim. It is large and bold in appearance. When exhibited at the Royal Horticultural Society's meeting on the 8th of April last, by Messrs. Barr and Sons, it received a First Class Certificate.

## Bulbs and Their Insect Enemies.

One of our great naturalists remarks that the chief objects in life amongst the insects are to eat as much as they can, and to avoid being eaten. Really, though, this fact is quite observable by any gardener who notices what is going on around him. The perils of insect life are enormous, only their prolific propagation saves many species from extinction. Insects furnish the chief food to many creatures; they are in danger from each other, and from men. About some insects it might be said, indeed, that if they eat a good deal, they are a long while over it, the larval life sometimes lasting many months or even years. Amongst the objects that are specially attractive to insects, from their being often soft and succulent, are bulbs, corms, and tubers. They are specially attacked by some species, but various root-feeders work upwards towards the crowns of plants. Within a bulb, insects find safe lodgment and plenty of food; the smaller foes may prove to be the worse, since their presence is often unobserved till too late.

We naturally, therefore, refer first to those tiny enemies of bulbs belonging to the mite tribe. 'Tis an old joke to say that they are mighty in doing damage to bulbs and other cultivated plants, though so diminutive. Their strength arises from their numbers, and their insidious habits; indeed, the gardeners of the old school seem to have had no idea of the mischief that was chargeable to them. More than one species may resort to bulbs, but *Rhizoglyphus echinopus* is pre-eminently the bulb mite, and a good deal about it was published in this Journal of 1887 and 1888.

[For particulars regarding this pest, we refer the reader to Mr. Abbey's article on another page of this issue.—ED.]

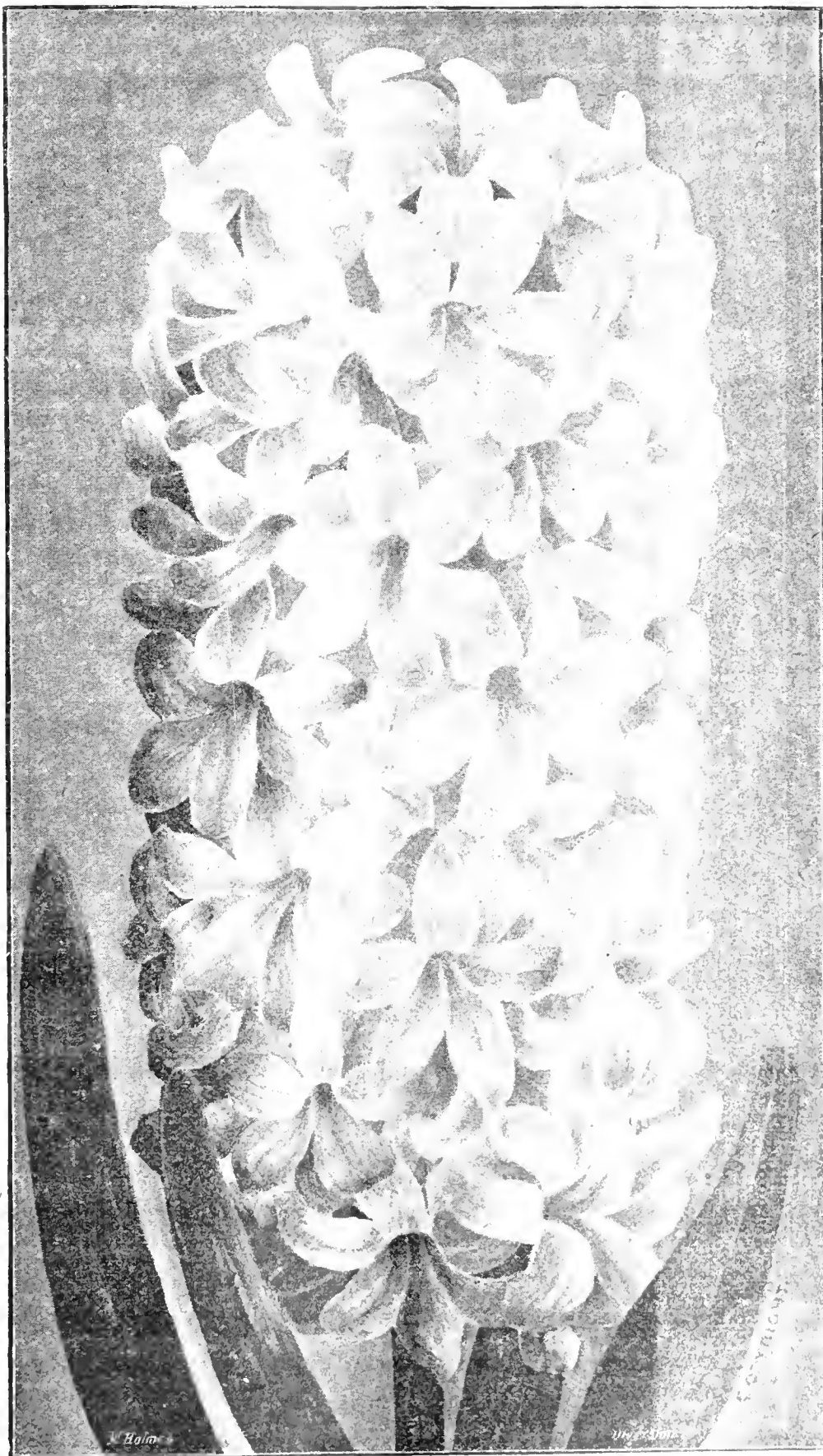
Of larger size, though apt to be overlooked from their artfulness, are those relatives of spiders and mites called the snake millipedes or Juli. One of the largest has the popular name of "Maggie Manyfeet;" but they cannot show a thousand, scarcely above sixty or seventy. These insects are general feeders upon decaying or living animal or vegetable substances, having an evil repute amongst horticulturists; still, the Juli have had their advocates, who assert they do more good than harm, but the case is strong against them. One of the commonest is *J. pulchellus*; though bearing this complimentary name, a gardener cannot like it, since it is very persistent in attacking plants, especially young ones. Its beauty, however, consists in a double row of crimson spots, best seen by magnifier. This insect has been taken seriously damaging specimens of *Eucharis*, and it is often found infesting both roots and bulbs of various species of the Lily tribe. Occasionally it damages young Pansies and Violas. Some Juli feed upon our root crops in fields; it is difficult to extirpate these insects, owing to their habits.

To the centipedes, closely allied to the millipedes, and often mistaken for them, though not so well equipped with legs, we are indebted, since they are notable insect-killers, and we may spare their lives when we can. Mostly, they are owners of mandibles, from which a poison is emitted into the bite they inflict, but they are harmless to human beings in our country. At certain seasons the centipedes are luminous, and leave a shining track upon the ground when crawling after dusk. No doubt they destroy many foes of bulbs, or of the crowns and roots of plants. I am not sure that they have been reported as damagers of bulbs, but the tiny insects called the *Collembola*, so common about frames and hotbeds, probably browse upon their surfaces at times. They are frequently numerous on tubers and succulent roots. Possibly some gardeners style them lice, and one group, the springtails, have a curious jumping apparatus; the crawling species are generally white and shining grubs or larvæ of beetles that live under the earth, sometimes come near its surface and feast upon a succulent bulb. That of the wingless black weevil (*Otiorhynchus sulcatus*), an insect which infests vinerias and Peach houses, often troublesome at roots of Vines and Strawberries; it feeds from September to the spring, a plump, legless, slightly hairy grub. Severe cold has little effect upon these insects. The mature beetles hide during the day, coming out at eventide in May to attack buds and young twigs. Two allied species of this genus, *O. picipes* and *tenebrioides*, pursue a similar course of life, and visit bulbs as well as roots; while larvæ, the first of these is a notable foe of the Raspberry.

Another beetle, strong and wiry, so well-named the wireworm in its larval state, also called the skipjack when winged, will wire into a juicy bulb if it has the chance. When bulbs are planted out upon lawns, they are occasionally visited by the cockchafer grub.

The irrepressible earwig, in its nocturnal wanderings, may arrive amongst bulbs of autumn growth, and enter any opening it may discover in a bulb, possibly make one if the bulb happens to be soft. Some folks doubt whether the common and larger earwig travels through the air; individuals apparently sometimes enter houses by the upper windows. Certainly, the lesser earwig, *Lebia minor*, likes to fly, and parties may be noticed on summer evenings taking excursions from one hotbed to another. We often see them amongst rows of bulbs, but they are not of great importance as enemies. To add one more, the cockroach, or *Blatta* of kitchens and cellars, makes occasional inroads upon plants in gardens and greenhouses; bulbs are attractive to it, and it frequently escapes observation owing to its habit of concealing itself during the daylight.—ENTOMOLOGIST.

[Should any reader have experienced loss from the attacks of other insects, and know of good preventive measures practised against them or any of the foregoing, they might be referred to.]



Grandeur a Merveille. (Referred to on page 272.)



## The English Tulip.

I willingly accede to the editor's request that I should write an article about this most unjustly neglected flower for this present Bulb Number, although I fear that few will read it with more than a languid and perfunctory interest. It is strange that this should be so, for there is no florists' flower more beautiful in form and colouring, and certainly none more refined and interesting in its markings. Its culture is easy, the standard varieties are readily and cheaply procured, and the National Tulip Society holds Northern and Southern shows where all who know more about the flower are received with open arms. There are, however, signs that the worst days for the English Tulip are over—may the signs grow speedily stronger, and strengthen into certainty!

The English Tulip must not be confounded with the Dutch Early, the so-called Darwin Tulips, or what the Dutch growers call Show Tulips or Old Dutch Amateur Tulips. I noticed the other day in a Dutch catalogue a statement that a "number of Old Dutch Amateur Tulips are often included in collections of English Tulips." This statement is scarcely correct, as we English growers only include one Dutch variety, *Comte de Vergennes*, and we only esteem it as a fourth rate flower. The English Tulip is certainly derived from the Old Dutch Amateur Tulip, but while the Dutchmen have done nothing to improve the flower for the last hundred years, raisers in this country have been working hard all the time, and have changed the degenerated, impure, dull coloured, confused old flower into the shapely, pure, brilliant blooms that may be seen at any show of the Tulip Society. I am expressing myself now as a florist or Tulip amateur only, and do not wish anything I write to be construed as a condemnation of the Dutch varieties as ordinary decorative flowers for the general garden, which would be most unjust and undeserved.

It is quite beyond the scope of an article of this kind to go deeply into the matter of culture, especially as I have pretty well exhausted myself in a series of articles written for the *Journal* some years ago. A few cultural notes are all that I can attempt. To begin with, the bulbs should be planted in November, 4in deep and 6in apart, in a bed about 4ft wide, and situate in an airy place, but sheltered from rough winds. The tallest growing kinds should be planted in the middle, and the dwarf ones on the edges of the bed, which should be well drained if situated in a wet or low-lying position. The best soil is the

top spit of a fat loamy pasture stacked for a year, and then roughly cut down, but any good garden soil that has been manured and grown a crop of Celery, Potatoes, &c., the year before will do very well. Fresh stable manure should not be used, as the bulbs do not like it; in fact, they often refuse to face it at all, and the plants die down without blooming.

After planting, the bulbs need no attention until the end of March, when, if the best results are desired, the bed should be covered by glass garden lights about 4ft 6in long by 3ft wide, raised on a temporary framework about 4ft from the ground. After the lights are on, the plants should be watered as often as needed, but care should be taken not to wet the foliage at all, and of course, watering must only be carried out on mild evenings.

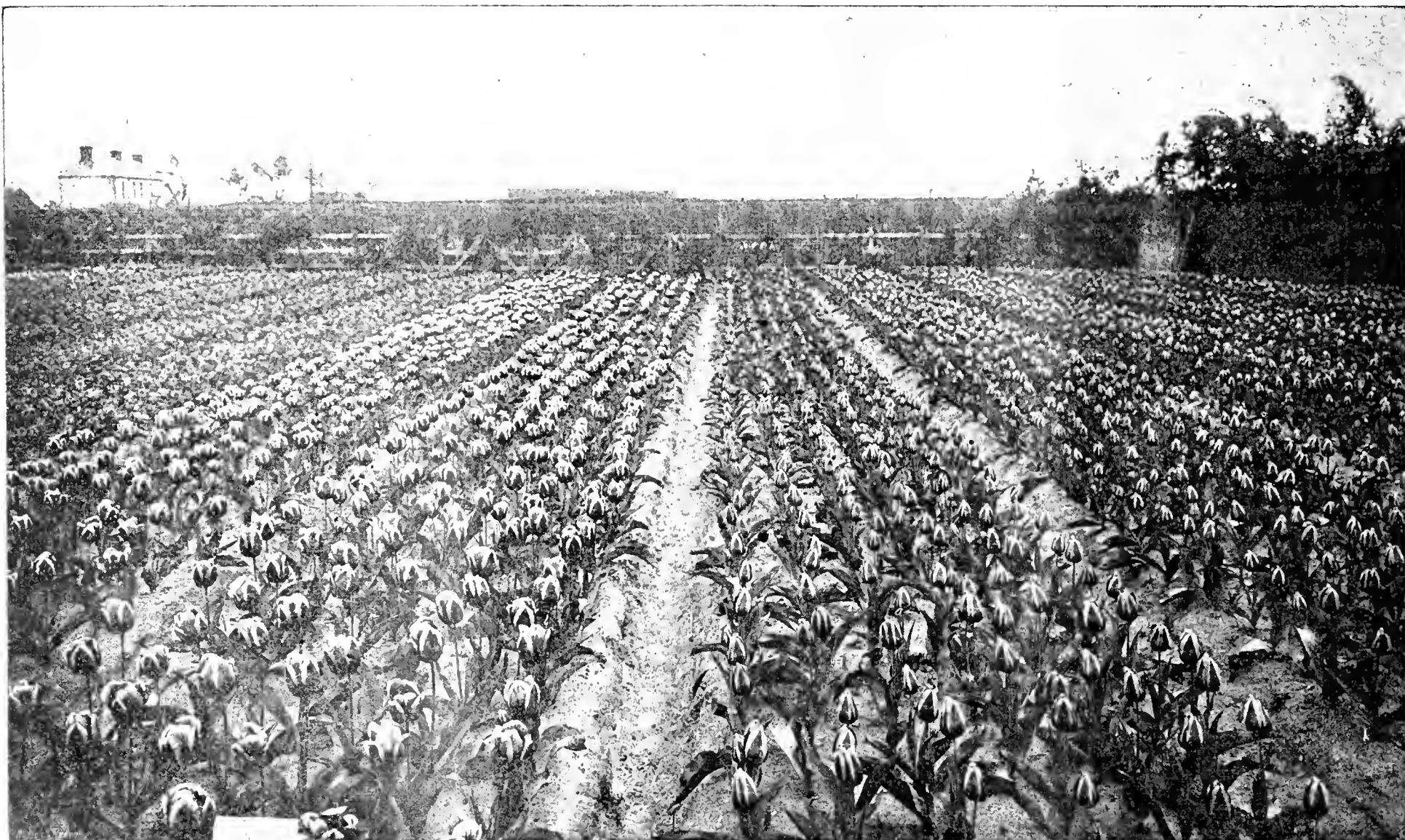
Towards the middle of May, or whenever the plants begin to bloom, the surface of the covering lights should be shaded from the direct sunlight, which spoils the beauty of many varieties by causing the colours to flush or run. As the petals fall the shading and lights may be removed and the plants allowed to ripen off. By the end of June, or a little later, the bulbs should be lifted, dried in a cool airy place, cleaned and stored away for planting again in November.

Grown in this way, and in suitable soil, there will be no need to get fresh bulbs again; the same bulbs will serve indefinitely, and if the offsets are saved as they ought to be, and grown on in a separate bed, the collection will rapidly increase in numbers. Offsets should be grown much in the same way as the flowering bulbs. It is, however, better to plant them a month earlier, and no protection at all is needed for them.

It is advisable to change the soil of the Tulip bed every second year, but if this cannot be done a copious addition of decayed vegetable matter before replanting will, in most cases, be quite as effective. A simple plan is to sow the bed immediately after taking up the bulbs, thickly with mustard, and to dig it in about 6in deep, just as it begins to flower. This is rather rough on the mustard, but as the succulent stalks and leaves quickly decay they make an admirable vegetable manure at little expense; rotten garden weeds would do just as well, but if these are used the seeds begin to germinate and become a nuisance.

### Classification.

Tulips are divided into three classes, named *Roses*, *Byblœmens*, and *Bizarres*. The *Roses* have white grounds coloured with some shade of red, which is the more esteemed as it approaches to scarlet. The *Byblœmens* have white grounds



A Field of Keizerskroon at Rush. (See reference on page 261.)

coloured with some shade of purple, which is best liked approaching in colour to blue or black; and the Bizarres are yellow ground flowers, coloured with some shade of scarlet, brown or black. The combinations most esteemed are scarlet on gold ground; black on gold ground; and black on clear lemon ground.

Each of these three classes is subdivided into three sub-classes called breeders, feathered flowers, and flamed flowers. The breeders are the seedling form of the Tulip; they are self colours of some shade of pink, rose, or scarlet in the Roses; purple, lilac, or lavender, in the Byblœmens; and scarlet, orange, or brown in the Bizarres.

Many of the breeders are very beautiful flowers, and are deservedly grown for themselves alone; but their chief interest lies in a most remarkable capacity they possess for what is technically called "breaking," or changing from a self colour, into beautiful variegations. These changes take two principal forms known as feathered, and flamed.

A feathered flower has the petals delicately edged with colour, and a flamed flower has, in addition to the feather on the edge of the petal, a beam of colour up the centre with graceful and distinct branchings, uniting the beam to the feathering. It is in the beauty and perfection of these markings, combined with good shape and perfect purity of base, and filaments, that the merits of a good Tulip lie; but the full understanding of these matters cannot be got by reading about them, and is only attained by study of the flowers and intercourse with growers of experience.

Many excellent breeders never break well, that is, they do not change into either of the two desired forms. Others break into good feathered flowers, but are of no value when flamed. Others are only good when flamed, while a few are excellent in all three states. Breeders of all varieties often break badly, that is, in a nondescript fashion, and should be discarded, as it is but rarely the produce of a bad break ever blooms well, consequently good breaks and the offsets from them are known as good "strains."

It follows from this, that the name alone of a variety is no indication of its value as a show flower, and care should always be taken to obtain bulbs from growers who know the points of the flower as understood in this country.

And now, having given some idea of this beautiful and fascinating flower, let me assure any lover of flowers that he or she would be immensely delighted with a bed of well-grown English Tulips, for there is no sight more gorgeous and glorious in the mass, as there is no flower more dainty or refined when examined minutely. The planting season is rapidly approaching, and as a guide to anyone wishful to start growing, I append a list of the best varieties in commerce.

**ROSE BREEDERS:** Mrs. Barlow, Miss Burdett Coutts, Rose Hill, Annie McGregor, Mabel, Lady Grosvenor.

**BYBLÆMEN BREEDERS:** Talisman, Adonis, Glory of Stakehill, Elizabeth Pegg, Beauty of Litchurch.

**BIZARRE BREEDERS:** Sir Joseph Paxton, Dr. Hardy, Goldfinder, Alfred Lloyd, Sulphur, William Lee.

**ROSES, FEATHERED:** Modesty, Heroine, Mrs. Collier, Comte de Vergennes, Industry, Mrs. Atkin.

**BYBLÆMENS, FEATHERED:** Bessie, Elizabeth Pegg, Adonis, Universe, Stockport, W. Parkinson, Guido.

**BIZARRES, FEATHERED:** Sir Joseph Paxton, Masterpiece, Lord Stanley, William Annibal, Garibaldi, William Wilson, Lord F. Cavendish.

**ROSES, FLAMED:** Annie McGregor, Mabel, Mdme. St. Arnaud, Triomphe Royale, Aglaia.

**BYBLÆMENS, FLAMED:** Talisman, Adonis, Duchess of Sutherland, Queen of the May, Chancellor.



Double Tulip Murillo. (See page 273.)

**BIZARRES, FLAMED:** Sir Joseph Paxton, Dr. Hardy, Samuel Barlow, Lord Stanley, Prince of Wales.—J. W. BENTLEY, Hon. Sec., Royal National Tulip Society.

## Potting Bulbs.

During this month a number of bulbs ought to be potted for winter flowering; indeed, to have a portion in bloom at Christmas it is necessary to pot at once. The bulbs, which should be dealt with at once are Roman and Italian Hyacinths, Roman Narcissus and Paper White Polyantha Narcissus, also Duc Van Thol Tulips. These can readily be had in bloom at Christmas by potting them during this month. There is a large demand for these bulbs, hence it is desirable to obtain the supply early.

In potting Roman Hyacinths, Italian Hyacinths, and Narcissi, four or five bulbs will be required for a 5 or 6 in pot. See that the pots are clean and drained with a few potsherds at the bottom, covering with a little rough material. Mix up a compost with loam, leaf soil, and sand. Half fill the pots with soil, and then place in the bulbs closely together. Cover with soil, just leaving the tips level with the surface. Water the pots with a rosed watering can, and allow them to drain for a day.

After this stand the pots in a shady position under a wall, and cover with ashes a few inches above the surface. They may remain until top growth commences and has pushed an inch or more. The Narcissi will have made top growth and filled the pots with roots in less than a month, while the Hyacinths take longer and can generally remain six weeks. The object of covering the pots with fine ashes is to encourage root growth before top growth, and thus ensure the plants doing well, and coming rapidly into bloom.

After they are brought out of ashes inure them gradually to the light, and keep in a cool frame until necessary to encourage the flowering, which may be accelerated by gentle heat, but when the bulbs are started early they can be brought into flower without a temperature higher than the greenhouse. No water is required during the time the pots are plunged, but after they are exposed the soil must be kept uniformly moist. Treat Tulips the same.

Freesias ought to be potted now, and they will bloom in January or February. It is not necessary to pot these bulbs in too large pots. They are small, and a number can be placed in a 5 in pot, giving each an inch space. Place in a cool frame, and do not plunge the pots under ashes.—S.



# HUMBER BRAND Horticultural Specialties

MANUFACTURED BY THE

## HULL CHEMICAL WORKS, LTD.,

G. CARR ROBINSON, F.R.S.E., F.I.C., F.C.S., Managing Director.

### HUMBER BRAND. "BITTER OIL" INSECTICIDE. HUMBER BRAND.

For Destroying Caterpillars of Winter Moth; Apple Blossom Weevil; Woolly Aphis, or American Blight; Red Spider on Gooseberry bushes; Caterpillars on Gooseberry bushes [see *Special Testimonial from Messrs. E. P. DIXON & SONS on this matter*]; for Washing Hop Bines, for preventing and destroying Fly; and as a Wash for Rose Trees, Chrysanthemums, &c.

"BITTER OIL" has been found a most valuable dressing for Fruit and Forest-Tree Nurseries; also for thoroughly cleansing the inside of Vineries, and as a Winter Dressing for Outside Walls on which Fruit Trees are trained.

"BITTER OIL" mixes readily with cold water—rain-water is to be preferred—forming a soft, milky fluid; there is no separation of oily or soapy matter, and the wash so produced will not scald young and tender foliage, or growing shoots.

## "BITTER OIL."

"BITTER OIL" is a certain and rapid exterminator of all Insect Pests at the minimum of cost to the user, and without the least danger to the tenderest of plants, or injury to the most delicate foliage. It is practically inodorous, and does not leave the slightest stain on plants after spraying or dipping in the strongest solution, when the directions for use for different requirements are adhered to. "BITTER OIL" is not only a safe "killer," but the proprietors claim for it the property of rendering (as its title implies) those forms of plant life subject to insect and parasitic pests dressed with this preparation, absolutely intolerable to them, and consequently immured from their ravages.

### TESTIMONIALS selected from many received, and entirely unsolicited:—

From Mr. J. Allsop, Head Gardener to the Right Hon. Lord Hotham, Dalton Holme, Yorks.—"I am pleased to say that I find it most effectual in destroying Aphid, Thrip, Green Fly, &c. It mixes well with water, and is very convenient to use."

From Mr. J. H. Reynolds, Head Gardener to the Right Hon. the Earl of Yarborough, Brocklesby Park, Lincolnshire.—"After giving 'he Bitter Oil' a fair trial I have much pleasure in testifying to its thorough cleansing powers; more especially was this noticeable on a fine lot of wall Plum-trees, which were becoming badly infested with Green-Fly and other troublesome insect pests. After two applications of 'Bitter Oil' the trees and fruit were left in a clean and healthy state, and are now furnishing a most satisfactory crop."

A further letter from Mr. Reynolds reads—"Plums are showing well for fruit, 'Bitter Oil' keeps them beautifully clean, and is so simple to use, I swear by

it for all these sorts of pests, and mean to apply it this time before they get at all bad."

From Messrs. E. P. Dixon & Sons, the Yorkshire Seed Establishment, Hull; and Gardens and Nurseries, Burton Constable, E. Yorks.—"A few days since we sprayed several thousands of young Gooseberry trees [we are authorised to state that some 15,000 bushes were dressed] which were heavily attacked with caterpillars, with the most gratifying results. Myriads of these destructive pests were instantly destroyed, and after the third day not a single one could be found alive, and though the operation was performed under a burning sun, not the least damage was done to either fruit or foliage. We have used 'Bitter Oil' largely the past two years in our Fruit and Plant-Houses and Nurseries, and have found it thoroughly effectual in destroying Scale, Thrip, Red-spider, and Mealy-bug, without the slightest injury to the most tender foliage."

*Well shake the Oil before measuring off quantity required.*

**STRENGTH:** { For Green Fly . . . . . 1 part Bitter Oil to 100 parts water. | For American Blight and Red Spider.. 1 part Bitter Oil to 50 parts water.  
 { For Black Fly and Thrip 1 " " 80 " " | For Scale and Mealy Bug .. .. 1 " " 40 " "

APPLY WITH A FINE SYRINGE OR SPRAYER.

**PRICES:**—Bottles, Half-pints, 1s.; Pints, 2s.; Quarts, 3s. 6d.; Tins, Half-gallons, 6s.; Gallons, 10s.

## Humber Brand. PLANT CLEANSER and INSECTICIDE. Humber Brand.

*This Preparation, used according to printed instructions, will effectively eradicate all Insect Pests to which Plants are liable, and without in any way injuring the foliage, or leaving any unpleasant smell. From the peculiarly cleansing nature of this preparation, Plants—particularly in towns—have their leafage distinctly improved and invigorated by the use of it.*

### Opinion of a PRACTICAL GARDENER on the "HUMBER BRAND" Plant Cleanser.

From Mr. George Pieker, Head Gardener to Francis J. Pease, Esq., J.P., Haslewood, Yorks.—"I duly tested the 'Humber Brand' Plant Cleanser. I have been waiting to see results before I replied respecting Mildew on Rose bushes . . . I mixed 1 to 8 and syringed on to Stove Plants for Mealy Bug, which we are greatly troubled with. Results, instant death to Bug, without the least injury to roots or foliage—all

that Plant Growers can wish for; then I syringed Rose bushes for Mildew, where foliage was covered with the spores . . . waited to see if the spores covered the foliage again, up to the present they are quite free from the pest; also the Stove Plants remain free of the Bug. . . . The death of insects is assured without injury to tender foliage . . . I believe that it [H. B. Plant Cleanser] will do all that any reasonable person may desire."

### Further opinion of a Practical Gardener.

Mr. Pieker writes further—"The safety that it can be applied over tender foliage, and the certain death of all insect pests, places the Humber Brand Insecticide in the front rank of all insect eradicators. It is a capital insecticide for cleansing trees (Fruit trees) of the American Blight [1 to 8 of water] . . . For winter dressing Vines, Peaches, and Fig trees it will be invaluable. I find 1 part of insecticide to 12 parts of water to eradicate Mildew and Green-Fly; 1 part insecticide to 10 parts of water to kill Thrips,

Red Spider, White Fly, &c.; and 1 part insecticide to 8 parts of water will kill Mealy Bug. The foliage should be thoroughly wetted either by dipping or syringing under and over the foliage. The insecticide will take 4 parts more of water when the water is heated to 145deg. Fahrenheit, or even to 180deg., and at this temperature will not hurt leafless trees. If all cultivated Plants and Trees could be syringed over once a fortnight with Humber Brand, they would always be clean and pleasant to look upon."

**PRICES:**—1s. Bottles; Half-gallon Tins, 6s.; Gallon Tins, 10s.

## Border Bulbs: Some Suggestions.

While there are many plants which look more beautiful in grass than in the border, it is not every garden which has suitable places for this, save it may be, to a small extent. Everyone who has a garden may, however, grow bulbs in beds or borders, and may thus add greatly to the beauty of the garden and to their own enjoyment. The border, also, is the better place for some subjects, such as the Gladiolus, the Tulip, the Ixia, the Ixiolirion, and such other bulbs as require to be lifted and stored away, or to have some protection in winter. It may be taken for granted that almost any plant which can be cultivated in grass may, less naturally, perhaps, be grown in borders or beds, and that a considerable number of others may be used to beautify them. Unfortunately, in cultivated ground, where high cultivation and liberal manuring is followed for the sake of other plants, diseases are much more prevalent to injure the beauty or to destroy the bulbs.

We cannot, however, do without bulbous plants in either the mixed borders or where we have separate beds of flowers. The effects which can be and are produced in the spring garden by massed beds of bulbs are known to all, yet they are less beautiful and give less pleasure than do groups of the same flowers in the mixed borders, where they have as a setting the leaves of the plants which are to bloom later, and which tone down, just as does the grass, the brilliant colouring of some of these bulbous flowers. To secure satisfactory results it is necessary that the planter should study so as to have a proper balance between the different parts of the border at the various seasons at which the bulbs will be in bloom. How often we see the Snowdrop or the Crocus carefully planted at the front of the border, the result being that when these and other early spring flowers are in bloom there is brightness in the foreground and nought but dulness behind.

This is easily avoided by planting these early bulbs further back. By the exercise of some forethought it is easy, also, to have these things so placed that a later-blooming plant of another habit will almost or quite hide the withering leaves from view.

In the border, as well as elsewhere, it is bold planting which tells, and one had better plant a dozen bulbs of a kind than one of each of a dozen different species or varieties; that is, unless you have a liking for a collection of plants, rather than for the



Narcissus, Cecil Rhodes.

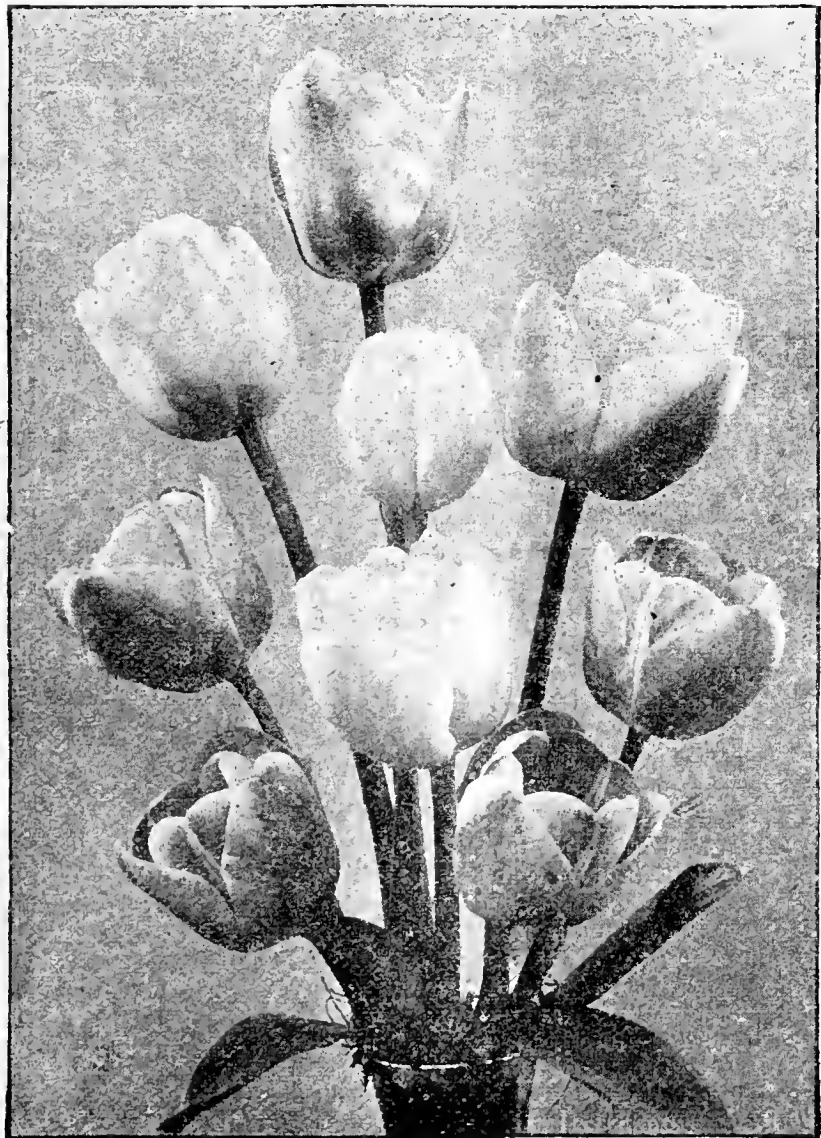
decorative effect of the border. It is also the place where those who have but little space can make the most of it by a cunning planting of early and late-blooming flowers together. A clump of spring Crocuses, Snowdrops, Scillas, or Muscaris may have below it a few bulbs of Lilies, which will spear up through the early bulbs and make the place bright again without injury to them. Or a mass of Spring Snowflakes may be followed in autumn by a group of any of the Meadow Saffrons or Colchicums.

A pleasing variant upon this, and one, too, which is beautiful in its effect, is that produced by carpeting a bulb with some dwarf, surface-rooting plant, either to flower with, or before or after the bulb. By judicious consideration many fine effects may be produced, either by the use of contrasts or harmonies. A favourite combination has been a bed of *Myosotis*, through which grow white Tulips. White *Arabis* makes a good groundwork for Tulips, and by its use one can either have a harmony in whites or the contrast of scarlet.

One drawback to the employment of permanently planted bulbs in borders is the trouble they cause by being invisible when they are at rest. If not properly labelled with a good, long, metal tally, they ought to have a stout hardwood wooden pin, renewed when necessary, firmly inserted in the ground in the centre of the clump. This will not only frequently save the bulbs from being injured by the spade, but will also be a good indication of where they are to be found if required for lifting. *SOREWAY.*

### NARCISSUS, CECIL RHODES.

This new variety has been fittingly described as "a giant pale-flowered Queen of Spain." What the parentage is we cannot state, but *N. triandrus* and *N. Emperor* have been suggested. Our illustration on this page, from a sketch by Mr. G. Shaylor, furnishes a good likeness of it. Miss Willmott, of Great Warley, had an Award of Merit for the variety when she staged blooms in the Drill Hall, Westminster, on May 6.

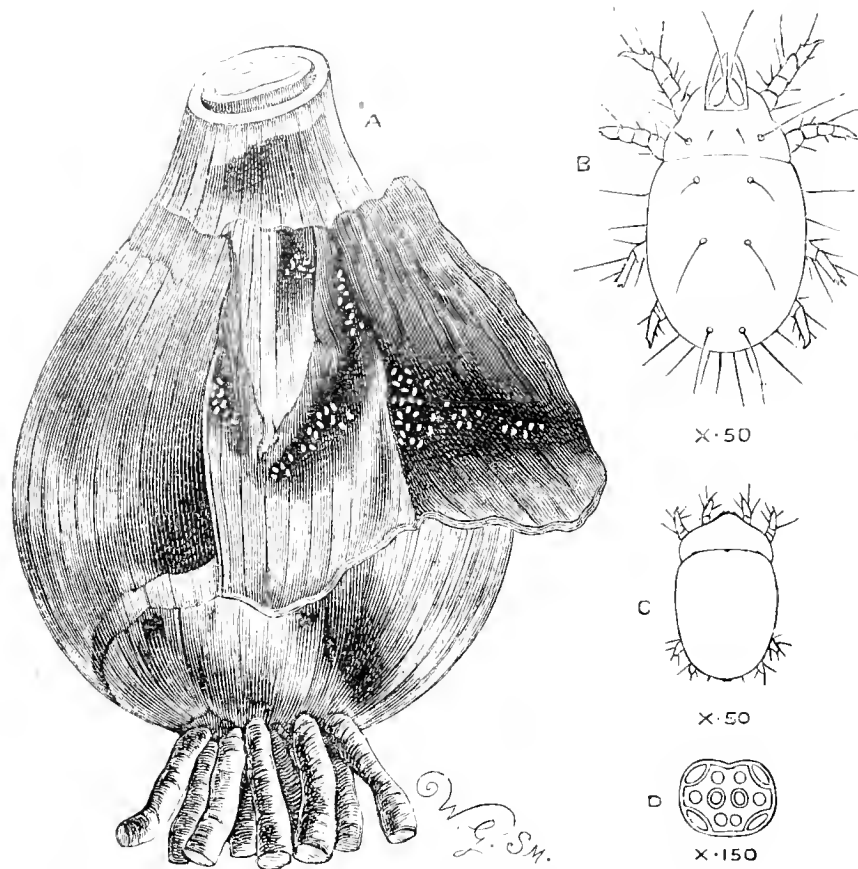


Darwin Tulip, Loveliness, rose.



## The Bulb Mite (*Rhizoglyphus echinopus*).

This pest, though commonly regarded as having a particular liking for the bulbs of *Eucharis*, and frequently referred to as the *Eucharis* bulb mite, attacks the roots of a great variety of plants both under glass and outdoors. As occurring on a bulb of



### The Bulb Mite (*Rhizoglyphus echinopus*).

- A, *Eucharis* bulb, natural size, showing mites.  
 B, Mite enlarged fifty diameters. Body colourless or nearly so, legs very pale rose, with two brown spots on the body.  
 C, Hypopial or harder-skinned form, enlarged fifty diameters.  
 D, Suckers from underneath hypopial form, enlarged 150 diameters.

*Eucharis*, it is faithfully represented in the accompanying illustration by Mr. W. G. Smith, with the mite in its two forms—the mite or *Rhizoglyphus*, and the hypopial or *Hypopus*. Into these extremely curious transformations I do not propose to enter, but content myself with the matter most interesting to cultivators.

In the case of bulbs the mite usually lives between the scales, and is protected by the outer or dead ones. The seat of the mite is well shown at A, though the mites are only just or scarcely visible to the unaided eye. The mites abstract the juices of the plant and set up decay, the foliage becoming sickly and the plants very unsatisfactory in all respects, at most continuing a sickly and lingering existence, rendering them worse than worthless. Perhaps the bulbs most liable to attack are *Eucharis* and *Vallota*. When such is the case the best plan is to allow the soil to become rather dry, then turn the plants out of the pots, remove all the soil, all injured roots, and scaly matter from both the base and neck of the bulbs; then wash them thoroughly in a solution made by dissolving 2oz of soft soap in 16oz of soft water by boiling, adding a lump of soda about the size of a nutmeg, and when dissolved remove from the fire and place in a wineglassful of paraffin oil, stirring briskly until amalgamated, then dilute to 1 gallon with boiling soft water. When the solution is cooled so as to bear the hand in it, dip the bulbs in it and rub the solution into every fissure with a soft brush. This treatment will destroy all mites reached, and in the course of a few days the bulbs may be potted in small, clean, well-drained pots of rather sandy turfy loam and peat, embedding them in and surrounding with crushed charcoal, plunging the pots in bottom heat if convenient. If the soil be kept moderately moist, but not wet, fresh roots will, in all probability, soon be emitted, and the plants grow well.

Other insecticides, such as Fir tree oil, may be used for cleansing the bulbs from the mites, cleansing them at once in clear water, preferably at a temperature of 110deg, and when drained dry potting. It is not always, however, convenient or even advisable to dissolve the bulbs, but treat them in the pots. For this purpose Clibran's *Eucharis* mite killer has attained considerable repute, and applied according to the instructions is efficacious. It, however, rather retards the growth of the plants to which it is applied for a time, but this is brief, the plants soon recovering and starting into vigorous growth, hence the insecticide acts both that way and as a fertiliser.

Similar remark applies to Little's soluble phenyle at a strength of one part in 1,000 parts of water, or one fluid ounce to 64gals of water. Soot water also appears, probably from the ammonia it contains, very objectionable to the mites. The soot, fresh, light and dry, should be made into a paste with water before pouring on the body of water, say 30gals to a peck of soot paste, then stir well with a broom and sprinkle on a couple of handfuls of powdered quicklime, and use the broom again. After standing twenty-four hours a scum will form on the surface, and this must be skimmed off. Underneath, with the exception of the sediment at the bottom, the water will be clear and bright, though a light brown colour. This soot water may be used for watering bulbs troubled with a mite as a cure, or as a preventive, diluted with an equal volume of water, and for general watering purposes at a quarter strength.

The bulb mite attacks the roots of many plants. I have found it on the roots of the *Gladioli*, especially the *Bride*, on the roots of *Cucumbers*, especially the root stems associated with such gentry as eelworms and whiteworms, on the corticated roots of *Vines*, and even adventitious roots, and not unfrequently on the knotty roots of stone fruits.

In one garden it has completely annihilated the *Snowdrop*, and in another rendered *Lily of the Valley* very patchy. What is the cause? Candidly I do not know. Where it is it does a lot of harm, and probably the best means of riddance outdoors is to soak the ground thoroughly with lime water made by placing a peck of quicklime, light lumps, in a tub, and pouring on 30gals of water, stirring well and letting stand forty-eight hours or twice as long, then using the clear lime water only. Probably, too, lime water does considerable good by acting on organic matter, at any rate the plants thrive afterwards.—G. ABBEY.

## Hyacinths and Tulips for Exhibition.\*

To obtain first-rate spikes of these showy spring flowers there are several cultural items of importance. In the first place, many think large spikes is a matter of selecting the bulbs. This I have proved is only in a small degree the case; for I would rely more upon good culture after having obtained *medium-sized solid bulbs*. I have found large bulbs have a tendency to throw more than one spike, and this is not at all desirable for exhibition purposes. The compost recommended is loam two parts and one part thoroughly rotted manure. To this is added half a part of road grit or coarse silver sand. The whole is well mixed and got into a state of even moisture—that is, neither wet nor dry—and placed under cover for use. Pots are cleaned and crocked ready, the 5in size being employed, and each has one bulb. The month of October is a good period for potting. If left later the bulbs may suffer. Another object of fairly early potting is to get an ample supply of roots before the tops grow to any extent.

This, to us, is the chief element of success in bulb culture in pots. I have seen *Hyacinths* potted and put into peat straight away, and the owner wondered why the bloom spikes refused to come out of the bulbs. The way to pot bulbs is to fill each pot with earth, press it in fairly firm, then scoop out a hole with the fingers to hold the bulb. Too often the soil is pressed in, then the bulb is pressed down on that. The consequence is the soil immediately under the bulb becomes very hard, and when the roots begin to grow, the bulb is pushed out of its place.

As the bulbs are potted, we stand the pots on a firm bottom of ashes in a cool frame, not that they require protection; as they are covered, but the glass may then be put on if necessary to guard off over-abundant rain. We do not water the earth after potting, but place an inverted flower-pot over each bulb. This protects the growth later. Then we cover the whole with cocoa-fibre or ashes, the former for preference, because ashes—at least fresh ashes—contain sulphur enough to do harm sometimes.

The *Hyacinths* are left in this covering for about three months, then examined. Ample roots will be found, and the tops will have advanced very little. The plants now need light. We shift them from the covering, but for a day or two leave the inverted flower-pots. Then they are removed to shelves near the glass in cool greenhouses to come on gradually. Most *Hyacinths* lose in size by being forced.\* Slow growth in a cool house is the thing to bring the spikes well up from the bulb, and large. Water through the winter months is not often required, but as the spring advances moisture at the roots is needed pretty often.

I would not give anything except clear water until the spikes begin to show colour; then they require something to push them out to their utmost extent. Nitrate of soda is a capital stimu-

\* The Royal Bulb Growing Society of Haarlem offer £24 in prizes for Tulips and *Hyacinths*, to be competed for at a meeting of the Royal Horticultural Society of England in March, 1903. Particulars of this competition may be received from the Secretary, R.H.S., 117, Victoria Street, Westminster, S.W.

lant. Use this at each watering at the rate of 1oz to 2 gallons of water. Hyacinths cannot be successfully flowered the second year; we therefore plant the bulbs in odd places in the garden. Here they produce useful bits of blossom for cutting. The varieties most adapted for exhibition are nearly all single kinds, the doubles not being so large or handsome generally.

Lord Macaulay, Charles Dickens, Fabiola, Gertrude, Moreno, Roi des Belges, Ven Schiller, and Mrs. Beecher Stowe belong to the crimson and rose shades.

In whites, La Grandesse, Mont Blanc, and Madame Van der Hoop are good; and Grandeur à Merveille is an excellent blush white, shown on page 267 from an illustration kindly lent by Messrs. E. P. Dixon and Sons, of Hull.

Czar Peter, Grand Maître, Lord Derby, and King of the Blues are fine in different shades of blue.

In General Havelock we get quite a black shade of colour. Ida is the best yellow; Koh-i-noor, salmon pink, is a semi-double Hyacinth that will be satisfactory for show purposes.

**TULIPS.**—When well grown, the Tulips are among the most showy of spring-flowering bulbs, the colours being so rich and varied. For Tulips we use a compost of sound loam and a fair sprinkling of grit. We do not like manure in the mixture, for anything that tends to draw the leaves spindly is a detriment to good culture. Six-inch pots are employed, and in each we place three bulbs. The former are prepared by being drained with potsherds, and a portion of the rough bits of soil is placed over them. The pot is filled and pressed in fairly firm, then holes are made to take the bulbs. In selecting these for each pot, try to get them as even in size as possible. Then we stand the pots on a bed of ashes in a cool frame, and cover the whole—pots and bulbs—to a depth of 6in with coëa fibre. The Tulips are left to themselves, except in the case of very heavy rains. They then require some protection, as it is not desirable to let the earth get soddened. If potted in October, which is a capital month for the work, by January they should be taken from the covering material. Place the pots in a cool greenhouse, and just keep away frost. In this position the growth is steady and firm. Tulips for exhibition may not be forced. It is only a few of the less fine sorts that are adapted for that mode of culture. Give the plants plenty of room, also abundance of air, that the leaves may grow in a sturdy manner. They will also require from this period plenty of moisture. Once let the roots get dry, the leaves will soon exhibit its effects.

As a stimulant for Tulips, I like manure water from the farmyard, and for a change soot water. This gives a deep green tint to the foliage. Tulips to be finely grown should throw the bloom well up from the bulb, with stiff leathery leaves that do not lop

all ways, and, of course, the blossom must be large. These bulbs will flower fairly well the second year, but not give fine flowers.

I do not grow many varieties, but rather select those which are distinct and possess other qualities.

There is no better white than White Joost van Vondel. This is a sport from Joost van Vondel, rosy crimson. Proserpine is a beautiful flower of a bright rose shade. Keizerskroon is scarlet edged yellow. This is a grand Tulip. Fabiola has blossoms of red and white; Ophir d'Or is the best yellow; Dresart is a dark crimson; Vermilion Brilliant, a dazzling red, is excellent. Van der Neer, purple, is very effective. Duchesse de Parma, orange and crimson, is good. Cottage Maid, white, edged pink, a well-known favourite. The three Pottebakkers, white, yellow, and scarlet, are first-rate, too, for pot culture. The above are single-flowered. These appeal to me, as they do to most people, as being the more handsome of Tulips. Alba Maxima, Imperator rubrum, deep scarlet, and Tournesol, red and yellow, are three of the best doubles.—H. G., Woking.

## DOUBLE TULIP, MURILLO.

This is one of the most pleasing double Tulips extant; indeed, for our own choice, we would probably accord it the first place. El Toreador is very brilliant; Imperator rubrorum is a glowing scarlet; rosea perfecta, and Rose d'Amour, and Salvator Rosa, with the Tournesols and Vuurbaak, are each meritorious and beautiful, but Murillo, of rose colour and flushed with white, ever remains a most charming and lovely flower. It grows 11in high, the stalks being stout, and the flowers very full. They expand widely under the sun's influence, furnishing an exceedingly cheerful reflection, for three weeks or a month, in good weather. It is a midseason bloomer, and to obtain the best effect from it, it is advisable to plant it in masses alone. For our illustration of this variety on page 269, we are indebted to Messrs. W. Clibran and Sons, of Altrincham.

## PARROT TULIPS.

The Parrot or Dragon Tulips bloom at the same time as the Cottage or Darwins, and no doubt receive their popular names from their gaudy and brilliant colours. Their large loose petals are lacinated at the edges, giving the flowers a wonderful character and charm. As an instance of how little known they are by the general public we need only cite a case which occurred with ourselves. Having a large assorted bunch of all kinds of Tulips, we were feign that others might see and admire them, and showing them to some non-gardening friends their astonishment was great at seeing the Parrot varieties, the like, for colour and weird elegance, they declared they had never before seen. The admiring throngs at Kew who gaze at the beds of Parrot Tulips there, would further prove that this flower is appreciated wherever it is grown or seen. The illustration on this page, and that of Darwin Tulip Loveliness, are from Messrs. J. Veitch and Sons, Ltd., Chelsea. To ensure a good display of this kind of Tulip, it is commendable to choose only sheltered beds or borders, and a sandy loam, plant in the bulbs 4in apart. They may also be grown in pots or hanging baskets, in the usual manner. For providing cut flowers, we are great in their praise. There are half a dozen good named varieties, including Large Yellow, Crimson Beauty, Perfecta, and Amiral de Constantinople.

## Gadding and Gathering.

"HERE AWA', THERE AWA'."

In a visit to Long Ditton during the Tulip's flowering season, it was part of my business to make note of some of the varieties, and it is to these that the present notes pertain. Each variety is grown in separate squares or parts of a lengthened bed, more numerous if it is popular, like the Cottage Tulip, Golden Queen, or less so if its merits are not so well known or appreciated. The short selection as under are all Darwin varieties—Tulips with handsome, though not as a rule large, and distinctly beautiful flowers, which are at perfection during the earlier weeks of May. They are confidently recommended to all for bed and border culture, or for planting in grass in the manner recommended by Mr. Dallimore in another page in this present number. As cut flowers they are stately and elegant, and for gentle forcing they are invaluable.

### Tulips at Ditton.

**DARWIN VARIETIES.**—*Antony Roozen*.—Very large and robust, pink edge, with deeper toned centre. Grows 2ft.

*Clara Butt*.—A charming flower, colour rosy-salmon. One of the finest, growing fully 1½ft.



Parrot Tulip, Crimson Beauty.



*Circe*.—One which my notes refer to as mahogany-coloured, with whitish edges to the segments. Others describe it as delicate heliotrope, which is a very different shade, surely; at any rate it is a lovely flower.

*Donders*.—Rich, dark vermilion, with dark violet centre, edged white, and a tall grower, over 2ft.

*Edouard André*.—One of the earliest. Deep rose-purple outside, mauve within, and blush white centre. Well spoken of.

*Fanny*.—A sweet variety, rose-lilac, and blooms with the earliest.

*Fra Angelica*.—Rich dark chestnut-red, segments strong and shine brightly. A fine Tulip.

*Grand Monarque*.—Very handsome, deep, rich purple flower.

*Hecla*.—Crimson, of great depth and richness.

*Loveliness*.—One of those delightful satiny rose-coloured flowers, of great refinement. Beautiful as a cut flower.

*Maiden's Blush*.—Later than many of the other sorts, this is a great favourite with nearly everyone. It is rose-blush, a colour always sweet.

*Peter Barr*. A very dark maroon, the globular flowers having a bluish "bloom" over them.

*Pride of Haarlem*.—Distinctly one of the finest of its class. "A brilliant, deep salmon-rose, shaded scarlet." The flowers are large, on very long stalks.

*Purple Perfection*.—The name is sufficient guide.

*Rev. H. H. D'Ombain*.—A rich crimson vermilion, not to be omitted by any chance.

*Scylla*.—Very lovely, deep rosy-cerise.

*Suzon*.—Rose-salmon, with bright blue centre, exquisite in all particulars.

*Tak Van Poortvliet*.—I find this Tulip has a special cross (X) against it in my note-book, which signifies special merit. The colour is a warm, glowing salmon rose—salmon-crimson, I might almost say.

*The Sultan*.—Well described as the Black Tulip. Contrasts grandly with a light variety. The flowers are strong and held erectly.

*White Queen*.—White, with a tinge of pink.

#### Cottage Tulips.

Under this head are placed these models of all that is loveliest and most admirable in Tulips, including such familiar kinds as Billietiana, Bouton d'Or, elegans, Golden Crown, Vivid, retroflexa, fulgens, and Picotee. They are the Tulips for bedding, and many of them succeed well placed under grass sward. As these seem to be much better known than the Darwins, it may suffice to give a list of those which receive, perhaps, the greater share of notice. This would include:—

|                       |                |
|-----------------------|----------------|
| Acuminata             | Goldflake      |
| Annie                 | Harlequin      |
| Billietiana           | Lac Doree      |
| Bouton d'Or           | Macropila      |
| Bridesmaid            | Maid of Honour |
| Bronze King           | Orange King    |
| Chameleon             | Picotee        |
| Corona lutea          | Retroflexa     |
| Didieri               | Royal White    |
| Didieri alba          | Strangulata    |
| Eastern Queen         | Snowdon        |
| Elegans               | Sweet Nancy    |
| Elegans lutea         | Sylvestris     |
| Empress of China      | The Fawn       |
| Faerie Queen          | The Moor       |
| Flava                 | Vitelina       |
| Fulgens               | Vivid          |
| Gesneriana spathulata | Yellow Crown   |
| Golden Crown          | Yellow Gem     |
| Golden Lion           | Yellow Queen.  |

Descriptions of these will be found in Messrs. Barrs' catalogue, as well as in those of some of our leading bulb merchants. I should, in conclusion, call attention to two newer varieties: Mrs. Moon, a beautiful brilliant yellow, and La Merveille, salmon-rose, suffused with orange-red—both of them good, but especially Mrs. Moon.

#### Tulips in Ireland.

I refer particularly to those from Messrs. Hogg and Robertson, of Rush, Co. Dublin. Mr. Richard Dean has something to say of bulb growing there in his article on page 261, and it will be remembered that a letter of Mr. Burbidge's on "Bulb Culture in Ireland" was printed in the Journal for December 19th, last year. Mr. Burbidge mentioned that at Rush "the wind is terrible at times, as it sweeps across the sandy plateau, either from the north-east, or when the spring gales tear furiously across the little fields or gardens from the sea." By glancing at the field of Keizerskroon Tulips on page 263, kindly lent to illustrate these notes, it will be seen that each little plot is fortified by sloping earth embankments or low mud walls; hedges of the oval-leaved Privet and other hardy shrubs are in places used in addition to, or in combination with, the earth-banks, so as to break or filter the wind. The land that has been under trial at Rush for seven or eight years consists of small irregular plots, and altogether comprises some twenty-one acres. Both Messrs. Hogg and Robertson, Baylor Hartland (of Cork), and Miss Currie (of Lismore) annually exhibit numbers of beautiful displays of Cottage, and Darwin, and species of Tulips in London, comprising such varieties as I have named in the foregoing lists. The Irish flowers seem even to excel in size and brilliance of colouring.—WANDERING WILLIE.

## Societies.

### London Dahlia Union, Sept. 13th, 17th, and 18th.

This three days' show was opened in the Royal Aquarium, Westminster, on Tuesday last. It was a good show. The trade firms were forward strongly, and competition in the open classes, and also those confined to amateurs, was fairly keen. There were seventeen certificates awarded to new seedling varieties, these including thirteen Cactus sorts and four Shows. The general arrangements of the exhibition were managed by Mr. John Green, chairman, and Mr. Richard Dean, the secretary.

#### Show and Fancy Varieties.

OPEN CLASSES.—for twenty-four blooms, distinct, there were six entries, and Mr. J. Walker, Thame, repeated his National success by carrying off the first prize. The stand was undoubtedly a strong one, though some of the flowers appeared a little coarse. The varieties were Muriel Hobbs, Harry Keith, Majestic, Jas. Cocker, Comedian, Mrs. Langtry, Chieftain, Wm. Powell, Florence Tranter, Jas. Hobbs, Mrs. Gladstone, Comte de la Sauv, John Hickling, Daniel Cornish, Mrs. Morgan, Perfection, Diadem, Matt. Campbell, Arthur Ocock, Sidney Humphreys, Maud Fellowes, Nubian, Ethel Brittan, and Victor. Mr. Chas. Turner was second with smaller though more refined flowers; a few of the best were Florence Tranter, Colonist, Merlin, Maud Fellowes, Arthur Rawlings, and Duchess of York. Mr. W. Treseder, Cardiff, was third with a good, clean exhibit, and Messrs. Keynes, Williams and Co., Salisbury were fourth.

In class 2 there were three contestants, and Mrs. M. V. Seale, Vine Nurseries, Sevenoaks, came out first with a very strong stand, the varieties being Perfection, Daniel Cornish, Gracchus, Miss Cannell, Wm. Rawlings, Mrs. Gladstone, Colonist, John Hickling, R. T. Rawlings, Hugh Austin, Florence Tranter, and J. T. West. Mr. J. R. Tranter, Henley-on-Thames, was second with good blooms of Colonist, Mrs. Gladstone, Harry Keith, and Marjorie; while Mr. H. Blundell was third.

#### Amateurs, Open.

The amateurs turned out well in the class for twelve blooms, Show and Fancy varieties, there being no less than nine competitors; Mr. Thos. Hobbs, Downend, near Bristol, being first with a good level exhibit. His varieties were Arthur Ocock, Mrs. Glasscock, Perfection, Eldorado, Emin Pasha, John Walker, George Hobbs, Mrs. Slack, R. T. Rawlings, Willie Garratt, Harrison Weir, and Arthur Rawlings. Mr. T. Anstiss, Brill, Thame, was second, having good flowers of Rev. J. B. M. Camm, Hero, Florence Tranter, and John Walker. Mr. S. Cooper, Chippenham, was a good third, and Mr. H. Blundell, gardener to Mrs. G. St. Pierre Harris, Orpington, fourth.

The class for six blooms brought out no less than ten entries, the general quality, however, was below the mark, Mr. S. Cooper, Chippenham, winning the premier award with a good board; his varieties were R. T. Rawlings, Emin Pasha, Perfection, Mrs. Gladstone, Ethel Brittan, and Mrs. Saunders. Mr. T. Anstiss was second with good typical blooms of Goldsmith, John Walker, and Chieftain. Mr. E. Jeffries made a fair third, and Mr. E. West, junr., Henley-on-Thames, brought up the rear.

#### Cactus Dahlias, Open.

Class 5, for twelve varieties of Cactus, six blooms in each bunch, brought out six competitors, who were all in strong form, and the judging must have given the adjudicators considerable trouble. Messrs. J. Burrell and Co., Howe House Nurseries, Cambridge, proved the victors. Their varieties were Hubert, Mrs. Ed. Mawley, J. W. Wilkinsen, Ella, Vesta, Ianthé, Albion, Pleasance, Lyric, Enchantment, Maurice, and Ida. Mr. Burrell is to be congratulated on the brevity of his names, and it is a pity the other Dahlia raisers do not follow his example, instead of multiplying names. Messrs. J. Stredwick and Son, St. Leonards, were second with beautiful bunches of Comet, Mary Farnsworth, H. J. Jones, Miss F. M. Stredwick, Etna, Vesuvius, and Eva. Mr. Chas. Turner, Slough, was third, having good bunches of Lord Roberts, Vesta, Mrs. H. J. Jones, and Slough Rival; and Mr. S. Mortimer brought up the rear.

Class 6 was for twenty-four varieties of Cactus blooms on boards, distinct. Here there were six entries, and a very strong class they made, too. Mr. W. Treseder scored here with a strong board. The varieties were Mrs. Ed. Mawley, Lucius, Mrs. H. J. Jones, Stella, Artus, Britannia, Wm. Jowett, Mrs. Carter Page, Clara G. Stredwick, Maurice Walsh, Wm. Clark, Vicountess Sherbrooke, Rosine, Genista, Arab, Mrs. J. J. Crowe, Up-to-Date, Lottie Dean, Mrs. Goddard, Vesta, Uncle Tom, Lyric, Ringdove, and J. H. Jackson. Messrs. J. Burrell and Co. were second with a board of very refined flowers, the best being Premier, Mrs. J. J. Crowe, Conrad, Ida, Albion; the best white to date, Mrs. Ed. Mawley, Pleasance, and Anabel. Messrs. Keynes, Williams and Co. were third, and Mrs. M. V. Seale fourth.

In the smaller class for twelve blooms, distinct, there were seven exhibitors. Mr. H. A. Needs, Horsell, Woking, was

deservedly awarded the premier position for an excellent stand; his varieties were Mrs. J. J. Crowe, Mrs. Carter Page, Mrs. Ed. Mawley, Galliard, Uncle Tom, Lord Roberts, Mrs. H. A. Needs, Mrs. H. J. Jones, Miss Winchester, J. W. Wilkinson, Eclipse, and J. Weir Fyfe. Messrs. Keynes, Williams and Co. were second to the amateur; their best varieties were Imperator, Ajax, Mrs. J. J. Crowe, and Princess. Mr. W. Baxter, Woking, was third, and Mrs. M. V. Seale fourth.

#### Amateurs.

In the classes confined to amateurs some excellent flowers were seen. Mr. P. W. Tulloch, of Hove, was a splendid leader for the nine, in bunches of three, having massive and beautiful blooms of Lucifer (well worthy of a certificate), a seedling of his own. Also Florence, P. W. Tulloch, R. Dean, Ajax, Mrs. Carter Page, Goldfinch, and Bessie Mitchell. Second came Mr. H. L. Bronsson, junr., from Sidcup, with well staged and showy blooms of Lord Roberts, Mrs. J. J. Crowe, Galliard, and others. A good stand, but lacking the size of Tulloch's, though more varied. Mr. W. Peters followed third, and staged very poorly.

For the six in bunches of three, winners were Mr. L. McKenna (gardener, Mr. Cretchley), Twyford, first, but who staged badly; second, Mr. Mawley, who has often shown better; third, W. Peters; and fourth, W. C. Pagram, out of seven entries. Mr. H. A. Needs was distinctly the victor for twelve blooms on boards, having a fine set, there being Floradora, Mrs. H. A. Needs (rich ruby crimson), Lottie Dean, Mrs. Mawley, J. F. Hudson, Mrs. C. Page, Lord Roberts, and others. Mr. E. West, junr., of The Laurels, Henley-on-Thames, was second with Rosine, Canary, J. Weir Fife, and J. F. Hudson. Mr. W. Peters and S. Cooper were placed so. For the six ditto, the order ran thus: Messrs. Needs, Mawley, and West, each staging beautiful flowers. Mr. Tulloch led in class 12 for a vase of twelve blooms; Mr. Needs second; and Mr. A. Taylor, East Finchley, third.

#### Cactus Dahlias, Open.

For three vases, each containing nine blooms, a number entered but two exhibitors—Walker and Treseder—were disqualified through not having the stipulated number of flowers. Mrs. M. V. Seale led, Mr. Needs following, and Keynes, Williams and Co. third. For Mr. F. W. Sharp and R. Dean's prizes in class 14, the winners were Messrs. Seale; Keynes, Williams and Co.; and J. Walker, placed so. Mr. S. Mertimer beat Keynes, Williams and Co. for six blooms of one variety on a board, he staging perfect Mrs. Mawley, and they, Clarence Webb. The third award fell to Messrs. Stredwick and Son with H. F. Robertson, a clear yellow. Six competed.

#### Pompons, Open.

For twelve varieties in bunches of ten, the results were: first, Mr. C. Turner with Thalia, Daisy, Montagu Wootton, Elsa, Cyril, Adelaide, Minnie, Bacchus, E. Hopper, Douglas, Jessica, and Nerissa; second, J. Burrell and Co.; third, Mrs. M. V. Seale; and fourth, Mr. J. Walker.

AMATEURS.—Six varieties in bunches of six. Here Mr. W. C. Pagram led off, followed by Mr. S. Cooper, Mr. W. Peters, and Mr. T. W. Playsted.

SINGLE DAHLIAS, OPEN.—For twelve, in bunches of six, Mrs. Seale, with Edie Oblein, Columbine, Trilby, Alice Seale, and Huntsman, was foremost; Messrs. J. Walker and C. Osman coming second and third. Mr. Mawley led for the six varieties, having strong and good blooms, including Naomi Tighe, Polly Eccles, Tommy, Demon, Victoria, and Aurora. They were substantial and refined. Rev. Spencer Pearce, of Woodstock, came second; and third, Mr. C. Osman, of Chertsey.

#### Miscellaneous Exhibits.

Amongst the firms contributing Dahlia collections were the following:—Messrs. Hobbies, Limited, Cannell and Sons, Dobbie and Co., J. T. West, M. V. Seale, Cutbush and Sons, T. S. Ware, Limited, E. F. Such, and J. Walker. Messrs. House and Son contributed hardy flowers, Blackmore and Langdon had tuberous Begonias, and Lawes, of 59, Mark Lane, London, staged samples of their fertilisers.

#### Awards.

Gold medals were awarded to Messrs. H. Cannell and Sons, J. Burrell and Co., and Hobbies, Limited.

Silver-gilt medals to Messrs. Dobbie and Co., J. T. West, I. House and Son, Blackmore and Langdon, M. V. Seale, and Hobbies, Limited (for Roses).

Silver medals to Messrs. J. Walker, W. Cutbush and Son, T. S. Ware, Limited, and E. F. Such.

#### Certificates of Merit.

The following Cactus varieties received Certificates of Merit:

*Eva*, pure white, a beauty, from Stredwick.

*Tesarius*, spoken of as an improvement on Alpha. It is a yellow-ground Cactus Fancy, speckled and striped crimson; good form; from Stredwick.

*H. J. Jones* must not be confused with Mrs. "H. J." It has a clear yellow centre, with rosy pink tips. (Stredwick.)

*Etna*, quite a new colour, a peculiar purplish lilac, not bright. (Stredwick.)

*Relcap*, one of Hobbies' novelties, bright crimson and "spidery."



Bulb Lifting on Bath's Floral Farms. (See page 261.)



*Winsome*, an ivory white of moderate size. (Hobbies, Ltd.)

*Mrs. T. Cherry*. Distinct; it is purplish red, overlaid with salmon. (Keynes, Williams, and Co.)

*Prince of Orange*, from the same source as the foregoing. A grand thing, with golden centre and reddish edge.

*Enchantment*, lilac mauve, with yellowish base.

*Albion*, ivory white. (Burrell and Co.)

*Maixman*, rich purplish crimson, a well-built, bold flower. (Mr. S. Mortimer.)

Messrs. Treseder had *Charm* and *Minnie West*, both of which we could not discover. They had also Show D. *Mrs. W. Treseder*.

The following Show varieties were certificated:

*Gold Mantle*, a beautiful bloom, rich golden, with saffron-gold suffusion. (Keynes, Williams, and Co.)

*Henry Clark*, purplish tipped flutes, creamy in the centre of each. (Keynes, Williams, and Co.)

*A. M. Burnie*, cinnamon-buff, from Mrs. St. Pierre Harris, Orpington.

### Derby Horticultural, Sept. 10th and 11th.

In unsettled weather this show was held on September 10 and 11. Groups of plants made a distinct feature, and there was a good competition. Grapes were finely shown, though they might have been more numerous in some of the classes. Vegetables in all the divisions provided, were excellent, and considering the trying season classes filled well.

Cut flowers were not set up in great numbers, but some fine Dahlias were noted as well as very fair boxes of Roses.

For groups of plants, prizes—six in number—ranging from £20 to £4 were provided. The plants were arranged in a circular tent, as segments of a circle on spaces of 200ft., and made a most effective display. Mr. J. Ward, gardener to J. H. Oakes, Esq., was placed first, his Crotons being examples of the highest culture. Mr. J. Thompson, gardener to G. H. Turner, Esq., proved a worthy second; Mr. J. S. Sharpe was third with a highly finished group, and Mr. Geo. Woodgate, gardener to Sir Oswald Morley, was a creditable fourth. In the cut flower classes for Dahlias, Roses, Marigolds, &c., Messrs. C. Carrington, S. Kerry, and J. Ward were the chief prizewinners. For a bouquet Mr. J. Norman was first, Mr. J. Wood second, and Miss Bayley third. Mr. Norman was again first with a vase of cut flowers, being followed by Mr. J. H. Goodacre, and Mr. H. Bond, gardener to — Malin, Esq.

There were only three entries in the class for a decorative dessert table. Here Mr. Goodacre's fine fruit easily carried him to the front. The arrangement of flowers on this table was also well carried out; the material used consisting chiefly of Montbretias and Francoas. Good Madresfield Court and Muscat Grapes, Clapp's Favourite Pears, Victoria Nectarines, Brown Turkey Figs, finely coloured Bellegarde Peaches and Washington Apples and well grown Melons were some of the dishes shown. Mr. J. Read was second, Mr. Ward third. For three bunches of Grapes, any white variety, Mr. Goodacre won with large bunches of Muscat of Alexandria; followed by Mr. H. D. Smith and Mr. S. Barker, gardener to the Duchess of Newcastle. The last-named was placed first in the class provided for three bunches of either Madresfield Court, Black Hamburgh, or Muscat Hamburgh, showing highly finished Madresfields. Mr. Goodacre second with the same variety, and Mr. Evans third with small berried but well coloured Black Hamburgh.

Mr. Goodacre came to the front again in the class for any other variety of black Grapes, showing huge bunches of Barbarossa, Mr. Dawson following with really fine Gros Colman, and Mr. Smith, who had good clusters of Alicante. Mr. Ward was first for a Melon, and Mr. Goodacre occupied the premier position for both Peaches and Nectarines.

There was a meritorious display of Apples here, Mr. Goodacre was placed first for six dishes of splendidly coloured examples of Gascoigne's Seedling, Faise d'Hoffinger, Lady Sudeley, Ribston Pippin, Washington, and Mother. Mr. G. Woodgate second, and Mr. H. D. Smith third. Mr. Goodacre was also first for a dish of dessert Pears, showing a good dish of Marguerite de Marillat.

Vegetables were well shown. For the three prizes offered for a collection by Messrs. Sutton and Son, Mr. J. Hudson was first, having fine Celery in his stand. Mr. Thos. Smith was second, and Mr. J. Read third. Messrs. Webb and Sons also offered prizes for collections grown from their seeds, which were won by Messrs. J. Read, Thos. Smith, and Geo. Woodgate in the order named. In the other numerous classes were some good exhibits, Potatoes, Onions, and French Beans being for the season of fair merit. Messrs. J. Hudson, Read, and Smith were the principal prize-winners in this section. Amateurs and cottagers, to whom special divisions were allotted, showed much high-class produce of vegetables, fruit, and flowers.

Special prizes were given by T. Woodward, Esq., and the committee for groups of Begonias staged with Ferns or foliage plants. Some nicely arranged groups of small plants were set up, the prizewinners, in their respective orders being Messrs. C. Adkinson, R. B. Tilley, and H. Bond.

Non-competitive exhibits made a bold display. R. W. Proctor and Sons, Chesterfield, showing Roses and Dahlias, and many

varieties of Carnations. J. Cheal and Sons, Crawley, had a stand of Dahlias of the Pompon, single and Cactus sections, the latter being particularly fine. Mr. H. Deveril, Banbury, exhibited Roses and herbaceous cut flowers, having some grand Phloxes, and Messrs. Vernon and Barnard, Willaston Nurseries, Nantwich, had a stand of Dahlias. Mention should also be made of the three boxes of Roses shown by Mr. Boyes, of Derby. These were very clean and fresh in condition.

### North Middlesex Dahlia and Horticultural.

North London has had its Dahlia Show as above. Time was when Holloway, Hornsey, Crouch End, Muswell Hill, and Wood Green were purely country districts, when there were many cultivators of the Show and Fancy Dahlias spread over the district, and occasional shows were held. Then came the transformation from country to town, the upspringing of formal streets where cattle grazed and corn grew. The change in the character of the neighbourhood brought changes in pursuits also, and the culture of the Dahlia declined. But since the Cactus and Pompon varieties became so popular the denizens of the streets are taking up the cultivation of the Dahlia in their gardens, and in order to afford an opportunity for them to pit their skill as producers, a small Dahlia society was formed at Hornsey, and an exhibition was held in 1901. The society has widened its sphere of operations, and adopted a broader designation, and it is now known by the above title. It has also exchanged a small hall as its place of exhibition for the noble central hall of the Alexandra Palace, and here its second exhibition was held on the 11th and 12th inst. The growth, both in the quantity and quality of the bloom, was seen to be most satisfactory, and if only the society be managed on sound business lines there is no reason why a strong society should not be built up in this district, as it appears to be well supported locally.

Some of the trade lent a helping hand, which was much appreciated. Mr. Amos Perry, Hardy Plant Nursery, Winchmore Hill, had a large and well-arranged bank of hardy cut flowers in season. Messrs. J. Cheal and Son, Lowfield Nurseries, Crawley, sent a very fine collection of Cactus, Pompon, and single Dahlias, set up in their usual excellent style, and to two single varieties, *Lerita*, maroon crimson shading to rosy crimson, and *Snowdrop*, white, both finely formed, certificates of merit were awarded. Mr. J. T. West, Dahlia specialist, Brentwood, had a thoroughly good collection of Cactus, Pompon and Show varieties in excellent character. Messrs. W. Cutbush and Son, nurserymen, Highgate, had bunches of Cactus and other Dahlias set up in elegant bamboo stands, and Mr. E. F. Such, nurseryman, Maidenhead, had Dahlias in variety and early Chrysanthemums. To each of the foregoing a medal of the society was awarded. Mr. A. Gower, garden artist, Floral Nursery, Muswell Hill, exhibited a model garden, worked out with flowers and foliage, having in the rear a representation of the ruins of a monastery.

A few of the classes were open to all members, and this enabled some of the leading trade and amateur growers to compete. One of the latter, Mr. H. A. Needs, Horsell, Woking, took the first prize with twenty-four blooms of Cactus Dahlias shown on boards; Mr. W. Baxter, nurseryman, Woking, was second; and Mr. S. Mortimer, Swiss Nursery, Farnham, third. With twelve Show and Fancy Dahlias Mr. Mortimer came in first with very good blooms; Mr. E. Hows, Finchley, a local grower, was second. In the class for six bunches of Cactus varieties Mr. H. A. Needs was again first, staging some excellent blooms of standard varieties; Mr. S. Mortimer was a close second. In another class for a similar number of bunches Mr. W. Baxter was first and Mr. E. Hows second, both showing good blooms. Mr. Mortimer was first with six good blooms of Fancy Dahlias, and good blooms of Pompoms and also of single varieties were staged. A good number of classes were reserved for local growers, and here the competition was generally good and the quality quite satisfactory.

There were classes for hardy flowers in bunches, also for Phloxes, specimen plants, &c., and for vases of Dahlias, bouquets, epergnes, and baskets of flowers, the last a really fine feature. There were also classes for vegetables grown in the cottage and allotment gardens.

In the centre of the hall Mr. G. Hemming, the superintendent of the Park, staged a very fine group of foliage and flowering plants, and in addition a collection of hardy flowers and fine fruit of several varieties of Tomatoes; all were highly commended.

### Wolverhampton Horticultural Club.

At a well attended meeting presided over by Mr. E. Simpson (the chairman of the club), Mr. W. Gardiner, Harborne, Birmingham, in response to a special invitation, delivered a lecture entitled "Conifers and Their Cones." Much interest was evoked by the descriptive remarks of the lecturer, as well as by the large collection of branchlet cones of the *Picea*, *Pinus*, *Abies*, *Cupressus*, *Juniper*; sections obtained from some of the largest *Picea* in the country. In addition to brief descriptive references of the various species exhibited, the lecturer also remarked upon the classification of the Coniferae.

**Wirrall and Birkenhead, Sept. 10th and 11th.**

This year is the Diamond Jubilee of the society, and at its two days' show the receipts were £500 better than at any previous one. Stove and greenhouse plants were a very feeble lot, but fruit, hardy flowers, and vegetables were grand. To the ever courteous secretary, Mr. A. H. Edwardson, much credit is due. For a group of plants, Mr. H. Ogden, West Derby, showed much taste; the second prize going to Mr. Haines, gardener to E. K. Laird, Esq. The latter had the best ten stove and greenhouse plants, and other minor classes. Handsome *Coleus* came from James Birch, Esq., and both Fern classes went to Mr. C. Jones, gardener to E. Evans, Esq.

Eleven competed for the stand of cut flowers for table decoration, the award going to Mr. J. Ennion with a blending of choice Orchids, Roses, Lilies, and the necessary greenery. Fourteen put up single hand bouquets, Mr. J. Williams leading. Choice Roses were staged by Mr. S. Bell, gardener to J. N. Hodgson, Esq. The entries for Cactus and Show Dahlias were quite bewildering, the superior Lathom grower, Mr. H. Banks, winning for twelve, and six Cateus, and twelve Shows; Mr. J. Clarke taking the six class. Mr. J. Lee had a splendid collection of hardy cut flowers, bold, fresh, and of fine quality; and Miss Gaskell superb annuals.

Mr. E. A. Young had a grand dessert table of Muscat and Hamburgh Grapes, Royal George Peaches, &c. Hardy fruits were good, Mr. A. J. Oakshott leading. The competition in the Grape classes was keen, Mr. Gaunt, Mr. E. Stokes, and Mr. O. Roberts each doing well. Other winners were Mr. T. Ferguson, Mr. H. May, and Mr. Richards. The vegetable classes, both for quantity and quality, were absolutely grand, but as the kinds were unnamed, the educational value is completely lost. Messrs. E. Alty and J. H. Jones won for the collections, Mr. Millington had the lead in twelve Tomatoes (thirteen entries), and Mr. J. P. Platt, jun., for six, out of eighteen entries.

Messrs. Dicksons, Limited, Chester, had a fine stand of herbaecous plants, grain, and roots. Mr. H. Middlehurst, Liverpool, a similar stand, whilst Messrs. Garton, of Warrington, had splendid samples of Black Tartarian Oats, New Era Wheat, and Maltster Barley, for which a gold medal was awarded.—R. P. R.

**Wakefield Paxton.**

Programme of meetings for the third quarter, session 1902, which are held at the Paxton Room, Woolpacks Hotel, Westgate, each Saturday evening, at eight o'clock prompt, is as follows:—September 6.—“The Begonia” (exhibition), Mr. W. H. Vere; September 13.—“The Tomato with Specimens,” Mr. G. Dunsmore; September 20.—Vegetable Exhibition, discussion opened by Mr. J. Eastwood, Lupset; September 27.—“The Dahlia” (exhibition), Mr. J. Twigge; October 4.—Exhibition of Autumn Leaves and Fruits. Lecture by Mr. T. W. Woodhead, Technical College, Huddersfield; October 11.—“The Michaelmas Daisy and Marguerite,” Mr. J. H. Wood, Kirkstall; October 18.—“The Apple” (exhibition), Mr. T. Wilson; October 25.—“Experiments with Chemical Manures in the Kitchen Garden,” illustrated by lantern slides, Mr. F. W. E. Shrivell, Tonbridge, Kent; November 1.—“The Scattering of Seeds,” illustrated by lantern slides, Mr. H. Crowther, F.R.M.S., Leeds Museum; November 8.—“The West Country,” illustrated by lantern slides, Captain H. S. Goodyear; November 15.—Lantern lecture, Mr. F. H. Wigham; November 22.—“The Chrysanthemum” (exhibition), Mr. A. Allison; November 29.—“The Wakefield Paxton Society—Its Origin, Objects, and Aims,” Mr. H. Hazell.—T. H. MOUNTAIN, A. S. NICHOLSON, Hon. Secs.

**Ipswich Gardeners.**

At the Ipswich and District Gardeners' Association's last meeting of the session, in the Co-operative Hall, Ipswich, on September 4, Mr. A. Sowman, horticultural lecturer to the East Suffolk County Council, delivered a lecture on “The Potato: its Origin and Character.” It had been proved by experiment on all kinds of soil that the first thing towards success in the cultivation was to see that the sets were whole, in good condition, thoroughly matured, well cared for in the full light, perfectly green and hardy, and kept as cool as possible. The worst possible flavoured Potato was that grown on animal manure, whilst as to chemical manure, used in a methodical manner, it was found that the plots were not so liable to disease, and the weight of the Potatoes was more. The Potato requires four important elements, viz., potash, to make it starchy; phosphoric acid, for the production of fruitfulness; nitrates for the production of healthy foliage, and for the manufacture of food and lime, without which all chemical fertilisers would be just as useful on the roads. If they wanted to battle against Potato disease, they must devote their attention to the food of the plant. Dealing briefly with the Potato disease, Mr. Sowman said this was more particularly noticeable where the soil had been injudiciously treated with nitrates. The disease should be treated with a mixture for ten rods of a pound of copper sulphate, a pound of lime, and a pound of treacle, mixed with ten gallons of water. The cost would work out at about 15s. per acre.



# THE BEE-KEEPER.

**Wintering Bees.**

Success the following season depends upon the correct autumn preparations for winter. There is a positiveness in this assertion which claims particular attention, the reasons for which are by no means obscure. Let a colony of bees be either stimulated to breed late in the season, allowed to go into winter quarters short of food, or with stores in an unnatural position, and the certainty that this is so will be manifest. It would be easy to accumulate examples where these errors in management have been the cause of restlessness in the stocks throughout the winter and reduction in the vitality of the bees, in addition to which late breeding itself will cause abdominal distension and spring dwindling. All these hindrances to successful bee-keeping should be avoided.

In the first place, the requisites for safety during the cold months are young, vigorous queens, abundance of young bees, sufficient stores suitably located, warmth and dryness. The time to prepare for winter varies with the surrounding conditions and seasons. It is much preferable, however, to be a little too previous than too late. When the old queens are to be deposed it will be found advisable to capture the old one before the supers are removed, otherwise when all the bees from the supers are in the brood chamber the difficulty in finding her will be increased.

When the young queen has been introduced, the stock should be stimulated by feeding in order to secure the desideratum of plenty of young bees; and if the food is given a little in excess of the wants of the colony, by the time it is discontinued the stock will have stored sufficient for winter. The young bees thus obtained will not only live through the winter, but will also work on the fruit blossoms the following spring. After the middle of September an examination should be made to ascertain the amount of food present. There should be at least 30lbs sealed, which is equivalent to six frames. If there is any doubt as to the quantity feed up rapidly. The preparation of the food for autumn feeding is important. Nothing but the finest cane sugar should be used, to 10lb of which five pints of water should be added. The syrup must be medicated with naphthol beta, and on reaching boiling point should have ½oz of tartaric acid added, which will convert it into invert sugar, preventing recrystallisation, which is essential. Vinegar is occasionally recommended, but the strength varies so much that it cannot be depended upon.

A powerful colony, with plenty of room for storage, will take 10lb in a few hours if given warm at dusk. When fed in this manner there is little or no disturbance, and by the following morning there is nothing unusual visible, with the exception of a larger number of bees fanning at the entrance. Another advantage of administering food in this way is that it is so rapid that it does not stimulate the queen to more egg laying, which at such an unseasonable time would be detrimental. There should be enough bees to cover at least seven combs on both sides. Stocks which are weaker should be united after deposing the oldest queen, and any bars not covered by bees removed, and the hive reduced by dummies. When reducing the number of frames, the fact that bees require empty combs to cluster upon must not be overlooked. Those which are half filled with honey should be placed next to the cluster, the natural position of stores when the hive is in a normal condition.

The bars should then be spaced 1½ of an inch apart, so that the bees may be able to form a more compact cluster, and instead of cutting holes through the combs for winter passages, which in most cases are occupied the following season by drone comb, it is better to use “Hill's” device, or place strips of wood about ½in thick on the top of the frames. The extra quilts should consist of bags, or the admirable protection suggested by Mr. Cheshire, consisting of a shallow box or super the same size as the brood chamber, with a loose cloth bottom filled with cork dust. The latter may be procured from any fruiterer who sells foreign Grapes. This forms a non-conducting quilt, which allows free ventilation without draught, while retaining the heat of the cluster. If the cork dust gets wet it will not rot like chaff or other vegetable matter.

Entrances should be opened 1in for each bar of bees, as in performing respiration bees consume a certain amount of oxygen, and to obtain this, expel the carbonic acid gas, and maintain the temperature of the cluster, entails a greater expenditure of energy when there is an insufficient entrance. This also serves to emphasise the wisdom of evaporative efficiency in quilts. The relative value of the different materials for this purpose has been a fruitful subject of discussion, and it appears that the superiority of felt is due to the fact that it entraps the air which it contains in a better manner than any other material commonly used, and it is the non-conducting properties of confined air upon which the efficiency of the quilt depends. The perfect quilt is sufficiently porous to permit slow upward ventilation without draught.

Inability to secure this while using linoleum constitutes one of its greatest disadvantages. The entrance being at the bottom makes



it impossible for the vitiated air to escape, and it has consequently to be driven out by the bees. With plenty of air underneath, suitable warm covering above, a waterproof roof, and the requisite conditions previously mentioned, stocks will require nothing more till March, except an occasional examination to ascertain if the quilts are dry.—E. E., Sandbach.



### Orchids—The Week's Cultural Notes.

Day after day of dull and wet weather is not at all to the liking of heat-loving Orchids, such as *Phalenopsis*, for no matter how good the heating arrangements, nothing takes the place of sun as a quickening buoyant agent to the atmosphere. We can only do our best, and that consists in keeping the glass scrupulously clean inside and out, and allowing sufficient heat on the pipes to enable the ventilators to be opened daily. The plants themselves, too, must be frequently sponged to remove accumulations of dust and enable the sensitive leaves to carry out their proper functions.

The roots must not be disturbed now further than to remove any of the surface moss that has grown too freely during the summer, and will hold too much moisture in suspension later on in the season. This is most safely accomplished by the hand. Some growers use scissors to clip it off, but in case of a root pushing upward, as often happens, this would be likely to be severed, and a check to the plant would ensue. In other cases the moss may be dead or decaying, and here it should be removed and its place filled with new.

The Mexican *Laelias* are many of them growing freely and throwing up their spikes. Every ray of sun possible should be allowed to reach them. In small collections where only a few plants of each species are grown these may be taken to the Cattleya house and suspended in the lightest part of it close to the glass, but when a house or compartment is set aside for their reception then the best must be done by elevating the specimens on pots inverted, and allowing all the room possible between them. *L. majalis* will by now have had a good turn in the open air, and should be brought in and hung up in the sunniest position and kept well on the dry side.

*L. autumnalis* and *L. anceps* are very similar plants in appearance and requirements; they are both needing moisture in medium supply, and considerable watchfulness must be practised, else slugs and small snails will make havoc of the spikes. A more difficult plant to manage is the refined and charming *L. albidula*. In treating this Orchid I have always found it best to let it have its head, and not attempt either to force it to grow or to rest when its inclinations seem to run in the opposite direction.—H. R. R.

### Hardy Fruit Garden.

**OUTDOOR VINES.**—Vines on outdoor walls and trellises that have a full crop of bunches should not be allowed to have such an amount of crowded growth as will exclude light and air from the interior, these conditions being necessary, not only for the complete ripening and finishing of the crop, but also for the ripening of the wood. Black Grapes need not be fully exposed to the sun, as the berries colour up better when partially shaded, but white Grapes require full exposure, and this should be secured to them. A little manipulation of the growths and the tying back of any obstructing leaves will afford the exposure necessary. Young canes necessary for next year's cropping should be laid in, and very little superfluous wood ought to be allowed. As a help towards finishing off the crop give a little extra sustenance to the roots, weak liquid manure, guano, scot water, or artificial manure providing suitable food. Should the border prove to be very dry, it is desirable to moisten it thoroughly with clear water. The sudden moistening, however, of a dry border may cause the berries to crack owing to the increased flow of the sap. This emphasises the importance of maintaining regular moisture throughout the growing season. A light mulching of manure is of great assistance in maintaining equable moist conditions.

**BLACKBERRIES.**—The new canes have grown vigorously, and of considerable length, but only the strongest should be retained, spacing them out on the trellis in order that they may become thoroughly ripened. When the crop of fruit has all been gathered, there is no further need of the bearing growths, and they may, therefore, be cut out, which will afford additional space. The extreme tips of the long growths can be removed. Further

shortening should be carried out in winter, when the canes may be pruned back to ripe parts.

**APPLES AND PEARS.**—The whole of the early, and many of the midseason varieties of Apples and Pears may be completed gathering now. Blustering winds of extra force often occur about this period, and the result is seen in the wholesale fall of varieties just commencing to ripen. Fruit which falls prematurely owing to grubs in them, or fallen fruit of any description, should be picked up, utilising the best, and destroying the rest. Fruit in store must be looked over frequently. Apparently good fruit is found commencing to decay, and requires removal before it contaminates other specimens. A few samples of bruised fruit may accidentally have been introduced, and should not remain.—EAST KENT.

### Fruit Forcing.

**VINES.—MIDSEASON HOUSES.**—Where the Grapes are still hanging careful attention must be given to the ventilation, a little air being admitted constantly, and in cold damp weather a gentle warmth in the hot-water pipes, so as to ensure a circulation, or prevent the atmosphere becoming stagnant and moisture being deposited on the berries. When the atmosphere is properly aerified Grapes will become raisins before they will decay, provided care be taken to promptly remove any berries that show indications of decomposition. A moderately moist condition at the roots is necessary to preserve the plumpness of the berries, and will not do any harm while the Vines have leaves in a more or less active state. Laterals should be kept well in hand, and even reduced when growth ceases.

Vines, from which the Grapes have been cut may now be divested of their laterals down to the principal buds, even shortening the bearing shoots to a joint or two above the pruning buds, which will tend to plump the basal ones, and the storing of matter of a nutrient nature in the adjacent wood. A free circulation of air is necessary, and in the case of young Vines, or where there is the least doubt about the thorough ripening of the growths, fire heat will be necessary. When indications of the maturing of the foliage is manifest, top-dressing is best effected, or even earlier when the Vines are weak and unsatisfactory. If the roots are active at the surface, in the old mulching or top-dressing, it will only be necessary to remove the loose material and give a top-dressing of turfy loam with a fifth of sweetened manure and a sprinkling of bonemeal two parts, and one of sulphate of potash, mixed, and about 4oz per square yard, or the advertised fertilisers will answer a similar purpose, that of supplying phosphatic and potassic matter to the soil. If the roots have not penetrated the mulching, remove the soil down to them and supply fresh compost, but not covering them deeply, 2 or 3in is sufficient, taking the opportunity to lift any that are deep and lay them in fresh material nearer the surface. A moderate watering will be needed in the case of inside borders, but outside ones will rarely need it at this season, and after they have had the benefit of the October rains a covering of leaves and a little litter over them will be all that is needed to exclude frost, which is important for Vines started while severe weather prevails. In the case of borders only partly made, a breadth of 2ft may be added to the front, choosing dry weather for the operation and putting the materials together firmly.

**YOUNG VINES.**—Those planted this spring or early in the summer will need every encouragement in keeping the foliage clean and healthy, also keep the laterals away from the principal leaves in order that they may have due exposure to the air and light, especially those at the base of the canes, so that the buds to which the Vines are to be pruned may be thoroughly matured, and the wood well ripened. In order to insure the ripening of the wood maintain a genial warmth in the hot-water pipes by day with moderate ventilation, and throw the house open at night, except when frost prevails.—ST. ALBANS.

### Trade Notes.

#### The Bulb Catalogues.

Messrs. Ware, Limited, of Hale Farm Nurseries, Feltham, have issued their autumn bulb and plant catalogue, which is found to be replete with good lists. Their tuberous *Begonias* at Bexley Heath are in full bloom, and well worthy of a visit.

Once again our pile of new bulb catalogues has risen to over a foot in height on the shelf assigned to them. First to hand came Ant. Roozen and Sons' (general agents for Great Britain, Messrs. Mertens and Co., 3, Cross Lane, St. Mary-at-Hill, London, E.C.), which we think is a useful catalogue for all gardeners, containing as it does important cultural notes, with good lists and descriptions, not only of Dutch, but also of Cape bulbs. Some hardy herbaceous plants are also included. Of home bulb lists, those of Messrs. Sutton, Veitch, Webb, Clibran, Dicksons, Limited, Barr and Sons, Pearsons, and R. H. Bath, Limited, are well arranged and thoroughly representative. Messrs. Hogg and Robertson's is very interesting, and E. P. Dixon and Sons, of Hull, include coloured illustrations in their list.

# TO CORRESPONDENTS

\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

THE FRUIT MANUAL (T. M.).—Dr. Hogg's "Fruit Manual" has been for long out of print.

MONTHLY ROSES (F. P.).—The old Monthly Rose belongs to the China class, and is known as Old Blush or Common China. Of this class Cramoisie Supérieure, crimson; Duchess, white; Fabvier, scarlet; Mrs. Bosanquet, waxy flesh; and Old Crimson or Dark China are fine for massing or beds.

LEAF-SPOT ON TOMATOES (Idem).—The best remedy for Tomato leaf-rust fungus, *Clado-perium fulvum*, is to maintain a gentle warmth in the hot-water pipes, admit air freely, and run up in the afternoon to a temperature of 100deg to 110deg for an hour or two, repeating this occasionally. Badly infested leaves should be removed and burnt, and the plants dusted with a fungicide in powder, such as the advertised, or should be, anti-blight, fostite, and strawsonite. As a liquid for spraying, Messrs. Wood and Sons' Veltha emulsion may be mentioned as effective, spraying upwards as well as over the foliage.

PRESERVING FRENCH BEANS AND PEAS FOR WINTER USE (W. E.).—French Beans may be preserved by collecting them when quite dry and of size fit for use, placing in glazed earthenware jars in layers alternately with salt, first placing in a layer of pods, then sprinkling on salt enough to cover them, and so on until the jar is full, when place on the lid tightly. When required for use the pods should be steeped in water overnight to abstract some of the salt. Peas are bottled, and to give colour are treated with sulphate of copper. We do not know the exact process: perhaps some correspondent will oblige with particulars.

RED SPOTS ON ZONAL PELARGONIUM CUTTING (C. N.).—Though we examined the red spots very carefully we found no trace in the tissue of the mycelial hyphæ, or externally any outgrowths of a parasitic fungus. The work appears that of the leaf-rust mite, *Tarsonymus Gerani*, which by its bites and mode of life of larvæ, is very pernicious, crippling the growth, and rendering these stunted and, as you say, brittle. The best hindrance to the pest is spraying or dipping in tobacco water, 1oz of the strongest shag tobacco being placed in a vessel and to remain until cool, then straining and using for spraying or dipping.

ARTIFICIAL MANURE FOR ORCHARD IN GRASS (Twenty Years' Subscriber).—As you cannot continue the depasturing and well-feeding of sheep, or even that of keeping fowls and pigs in the orchard, you may prepare a mixture as follows:—Nitrate of soda, 1½ part; dissolved bones, 6 parts; high grade mineral superphosphate, 3½ parts; muriate of potash, 3 parts; kainit, 4 parts; wood ashes, 2 parts; mixed. This contains about 1.9 per cent. of nitrogen, 8 per cent. of phosphoric acid, and 11 per cent. of potash. It may be applied in the autumn at the rate of 5 cwt per acre, 3½lb per rod, or not later than February, as soon as the ground is drained. Autumn, however, is the preferable time. Another simple preparation is composed of equal parts dissolved bones and kainit, applying 3½lb of the mixture in the autumn, and in spring, when the buds commence swelling, supply 1½lb per rod of finely crushed nitrate of soda, or preferably, as the ground is a stiff yellow loam, sulphate of ammonia.

MALLOW STEM DISEASED (F. P.).—The Mallow stem is affected by the *Sclerotium* disease, a parasitic fungus named *Sclerotinia sclerotiorum*. The stem is the part most frequently attacked, the disease first showing itself just above the ground-line as a delicate white mould encircling the stem. The mycelium also penetrates into the interior, and gradually extends upwards. Finally, the stem becomes dry and brittle, and falls down. If such diseased stem is cut open, a considerable number of black sclerotia of very variable size and shape are met with in the pith, surrounded by mycelium, and they often form on the outside of the stem. These live in the ground until the following spring, when they give origin to several funnel-shaped ascophores, from which the spores produced in asci are ejected at maturity. Diseased stems should be collected and burned, and where the disease has existed before, the ground should be given a liberal dressing of quicklime, avoiding the use of fresh manure, especially on the surface of the soil.

ARE ALL LARGE ROUND GOURDS EDIBLE? (F. J.).—Most of the large Gourds or Pumpkins are edible, such as the Large Green, Large Yellow, Mammoth, and Ohio Squash. The other, or Ornamental Gourds, are not edible, being grown for decorative purposes from their peculiar and varied forms, also colouring of the ripe fruits.

VAPORISING WITH XL ALL COMPOUND FOR THE DESTRUCTION OF RED SPIDER (A. J.).—Your experiment is very interesting, the red spider being certainly still alive on the Croton leaf, hence vaporisation with nicotine compound evidently has no material prejudicial effect on this pest. The communication is also valuable as showing the effect of nicotine vapour on the fronds of Ferns, Pteris, and Adiantums.

DISEASED VIOLET LEAVES (H. S.).—The leaves are affected by the Violet leaf-spot fungus, *Cercospora violæ*, which causes dry pallid spots to form on the leaves of *Viola odorata* and the varieties of Sweet Violet, and often prove troublesome, if not wholly destructive, to the foliage in the late summer and autumn months, both outdoors and under glass. It begins as a very minute speck and rapidly increases in size, forming large blotches, and frequently the spots run into each other, involving a large portion, if not the whole, of a leaf. The disease spreads very rapidly, so that there is scarcely a healthy leaf left. It is most prevalent in cold and wet seasons. Removal and burning of the affected leaves check the disease somewhat, but as the spores are produced whilst there is the merest speck visible to the naked eye, this does not wholly arrest the disease. Spraying with ammoniacal solution of copper carbonate may protect the young leaves from attack, but fungicides have not given good results as regards prevention and suppression of this pest. Growing thinly and allowing the plants plenty of air and light is the best means of avoiding the disease. This will be accorded to some extent by removing infected leaves.

NAMES OF FRUIT.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (A. W.).—The Apple is Yorkshire Beauty, syn. Red Hawthornden. (P. A. T.).—The Grapes are, 1. West's St. Peter's; 2. Buckland Sweetwater; 3. Golden Queen.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (Nemo).—1. *Celsia* sp.; 2. *Enonymus japonicus albo-marginatis*; 3. *E. j. aureo-marginatis*. (Water Weed).—Sorry to have held the names a week; 1. *Potamogeton densus*; 2. *Myriophyllum verticillatum*; 3. *Ranunculus heterophyllus*; 4. *Clara fragilis*. (Oxon Subscriber).—1. *Spiræa japonica*; 2. *Impatiens Roylei*; 3. *Polygonum cuspidatum*. (J. C. Subscriber).—No. 1, *Odontoglossum Andersonianum*; 2. *Veronica virginica*; 3. *Stachys grandiflora rosea*; 4. *Lythrum Salicaria*, a handsome native plant. (C. T. G.).—*Galega officinalis*. (F. W.).—*Miltonia Clowesi*. (P. A. T.).—Your Conifers next week. Please only to send one leaf at a time in any one week, else there may be confusion.

## Trade Catalogues Received.

Harrison and Sons, Seedgrowers and Merchants, Market Place Leicester.—*Bulbs and Roots*.  
Pope and Son, King's Norton, Birmingham.—*Bulbs*.  
Thomas S. Ware, Ltd., Hale Farm Nurseries, Feltham, Middlesex.—*Bulbs and Plants*.

## Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.               | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|---------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|                     |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                     |                    | Dry Bulb.               | Wet Bulb  | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.<br>September. |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ... 7        | W.                 | deg. 52.1               | deg. 51.5 | deg. 70.8 | deg. 42.6 | Ins. —      | deg. 59.7                             | deg. 60.5      | deg. 58.4      | deg. 34.5                    |
| Monday ... 8        | S.E.               | 60.7                    | 57.5      | 69.3      | 43.0      | —           | 59.0                                  | 60.2           | 58.4           | 36.0                         |
| Tuesday ... 9       | E.S.E.             | 64.1                    | 60.0      | 69.5      | 53.5      | —           | 59.2                                  | 59.8           | 58.4           | 40.3                         |
| Wednesday 10        | E.S.E.             | 62.1                    | 59.2      | 66.0      | 56.2      | 0.61        | 59.8                                  | 59.5           | 58.3           | 45.5                         |
| Thursday 11         | E.S.E.             | 60.9                    | 59.0      | 65.2      | 54.2      | 1.77        | 60.0                                  | 59.5           | 58.2           | 45.0                         |
| Friday ... 12       | N.N.E.             | 50.3                    | 49.2      | 60.0      | 49.5      | —           | 60.0                                  | 59.7           | 58.1           | 50.7                         |
| Saturday 13         | N.N.E.             | 48.8                    | 43.9      | 56.6      | 40.5      | —           | 57.9                                  | 59.4           | 58.1           | 33.2                         |
| MEANS ...           |                    | 57.0                    | 54.3      | 65.3      | 48.5      | Total. 2.38 | 59.4                                  | 59.8           | 58.3           | 40.7                         |

The weather for the most part has been dull and cool. A thunder-storm occurred on the 10th, and a very heavy fall of rain on the 11th.





## To the North.

It is not very often we give ourselves the pleasure of an outing at harvest time, but business called us North (how the North does call us of northern breeding!), and the journey has been one of interest and profit. From the Midlands to canny Newcastle is rather like ascending high hills; the vegetation is in zones of progress; imperceptibly you pass from one to another. The signs are the backwardness or difference of the crops. The best crops we saw were to be found in the rich alluvial valley of the Trent, and, taking into consideration the heavy rainfall, we were astonished to see the Barley so bright and clean. Funny term to apply, "clean," but there is no other word to indicate the pleasing appearance of the straw. What we could not see, but what we heard of, was the sad damage the crops had sustained during the heavy gales of September 3, when the wind was quite equinoctial in its character. "Necked Barley" means serious loss, for the necked heads are among the best and most upright. There are certain classes of Barley that are liable to this danger, and unfortunately they also happen to be among those which are essentially maltsters' varieties.

Not only is there sad havoc among necked Barley, but Oats suffered to a great extent, the upper grains being completely knocked out, as though with a perfect threshing machine. But there's a silver lining to every cloud; there is no drying agency like wind, and the fields were very bad; the going for reapers must have been hard, and then, again, this year "seeds," i.e., young Clovers, are superabundant, and it has been a problem how to get those seeds dry and fit to lead by the time the corn was ready. It seemed such a risky business, and so provoking, that the Barley, the valuable part, stood risk of much weathering, while the butt end of the sheaf dried. We saw several good upstanding fields of Rivett's Wheat, grown, no doubt, not for the grain as much as for the valuable straw, which is of such excellent quality, and so in demand for thatching purposes and the covering down of the Potato pies. The fault of Rivett is this, it is always so backward in ripening; but, late as the season is, perhaps this time that is not altogether a drawback, as the wind, and now the brilliant sunshine, will cause all the other varieties to be ready at once, and as it is very certain the farmer and his forces cannot be in two places at once, it is well there is one crop, at least, that can wait without taking harm.

Never have we seen fuller Potato rows; but, as a travelling companion remarked, as we flew past the fields: "They've got it!" There was a note of satisfaction in his tone not understandable of the outsider. The outsider saw a brown, withered appearance, which did not look promising. The grower knew that meant disease, and in a disease year prices always rise. There is such a thing as having too good a crop; a crop which causes prices to fall to almost (or, indeed, to) vanishing point, a point where there are no returns for the poor grower. We have still to hear of that railway company which reduced its tariff on account of an overstocked market. We were not able to say whether any of the fields we saw had at an earlier period been sprayed, but we should very much like to know how those plots fared that had received a dressing, say, twice or three times.

We saw one unusual industry, and that was the British Peat Moss Company. We believe that this industry is responsible for the introduction of a foreign element. There are Dutch colonies to be found where this peat moss abounds, and land that so long has laid waste is now returning to its owners a very comfortable provision. Certainly peat moss litter is growing in favour, and only wants to be better known to be appreciated. It is funny stuff to look at, but is eminently adapted for bedding purposes, and especially under those conditions where much stock has to

be kept in limited areas. It is antiseptic, and therefore is a valuable agent in minimising nasty smells.

Taking the country throughout, the Turnip and Swede prices were excellent. We saw one field in Durham which was patchy, and we were near enough to see that in places the plants were dying out. Certainly it could not be from lack of moisture. Query: Wireworm? What struck us most was the vivid green of the grass fields and great quantity of "good meat" still remaining; but, and we could not account for it, we noticed great dearth of stock. Where is the stock? They certainly were not grazing, and the state of the pastures presented no solution. We fancy we can give a pretty good guess at the reason. What could possibly be spared have gone to pay harvest wages and midsummer bills. The haystacks are abundant, and, let us hope, good.

There is no doubt about it, that with the present delightful change in the weather the northern farmer will this year stand a better chance of a good harvest time. Then, again, sometimes it is a good thing to be backward. There can this season be no reason why the young seeds should be grazed, and that will be a distinct gain next spring.

With the end of the summer comes the dwindling record of shows, and to take their place we find plenty of ram sales and sales of store sheep, and it may possibly be that the fact of scarcity of money among farmers will affect these sales adversely. The same applies to the dispersal of various shorthorn herds and shire studs. Farmers are not backward, as a rule, in securing good sires, but they are blamed, and not without reason, for neglecting to look more closely after the qualities of the stock on the female side. They are adverse to the purchase, say, of promising young heifers of a good milking strain, whereas a little outlay in this direction might prove in the long run a veritable gold mine. Remember, in breeding good antecedents on both sides tell. There is now a distinct movement among dairy cattle; the milking herd is in process of being "graded up." That has to be done if we are to produce milk to meet the requirements of the new regulations.

As we write the auctioneer's hammer falls at Gravel Hill, Cambridge, and Mr. Fred Crisp's shires are under dispersal. There will be a unique chance for those who wish for some really good blood, and we shall mark with interest the ultimate fate of the two daughters of that champion mare, Starlight, that was purchased for over 900 guineas from the stud of R. N. Sutton-Nelthorpe, of Scawby, in the county of Lincs.

N.B.—We have just heard from a friend of a field of Barley near Dunbar where, to the naked eye, there is not a single head left; all fallen before the terrific gale of September 3.

## Work on the Home Farm.

Rain again to-day! But neither men nor horses will be averse to a rest, whatever the farmers' feelings may be. Great progress has been made with the reaping, and a stack or two here and there denote that we have some early birds amongst us. Barley being more forward than Wheat is nearly all in stook, and it is wonderful how well the machines have cut it. The old rake machines have done a good deal of the work, but where binders have been requisitioned they have worked well. They certainly clean all up better than the other machines, but the straw-bound sheaves are far more quickly in condition for leading. Stackyards will be very full: the crops are bulking up heavier even than we expected. Farmers will be wise to stack a portion in the fields. The stacks are quicker in attaining thrashing condition and in less danger from fire than when packed closely together.

We wonder that insurance companies do not make stipulations against the close concentration of large quantities of corn stacks. They object to taking risks on stackyards which are near lines of railway, but we have many times seen thrashing engines set between high unthatched stacks in hot, dry weather, when a spark would set fire to them, and there have been a score or more by stacks closely adjoining. Farmers insure their corn in stack, and forget that the insurance can only be partial. However well the insurance company treats him he is sure to be a loser, and often a considerable one, and it is noticeable that a farmer who has had one serious fire never afterwards is found to put many (corn rick) eggs into one (yard) basket.

The dry week did much to dry up the dead Potato haulm and retard the spread of disease, and we hope the rain will not give it new life. The blight on the leaf is very general, especially so with regard to Up-to-Dates. Professor Maercker is the variety which keeps the greenest.

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*Journal of Horticulture.*  
THURSDAY, SEPTEMBER 25, 1902.

**Some Shattered Idols.**

NOT only from a horticultural standpoint, but an agricultural, commercial, and domestic one, there has been many, and, in some instances, grievous shattering of the idols set up in the minds of thousands, nay, millions of British minds this year, that to which particular and special thoughts are turned being the Coronation collapse on the great and memorable day of June last. Though in the great commercial world every unit suffered a proportionate loss, that affecting horticulture was an immeasurable one, for vast preparations were made by the forced advance on the one hand, and the retarded effort on the other, all culminating in wholesale loss, because so much of the gardeners' produce is of perishable nature, and so entirely opposed to other wares that may be stored for future contingencies. The great flower and fruit emporiums around London, and many hundreds scattered over the whole kingdom, were all bent on providing for the great Coronation festival, and all had hopes of reaping a reward for labour proportionate to the investment indulged in; but to what extent was the shattering of the idols and the hopes of individuals is known, probably, best only to the unit severally of the great mass of providers.

These thoughts, though of the now remote past, still run concurrent with those of the present time, for if the Coronation collapse was the only failing of the season it might sooner have been forgotten. Such, however, is not the case, for as the weeks and months have come and gone, dating from the early days of the year, there has been a much greater preponderance of ills than triumphs. The market and flower show speak eloquently in this language of disappointment. In every

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.



conference between gardeners, which the annual flower show bring together, it may be at the Drill Hall, at Shrewsbury, or the remotest village in the country, there are sure to be the same topics raised when a quorum of gardeners, amateur or professional, meet, and individual troubles met and surmounted in their many forms are related as an appeasement and solace offered and accepted from one to another. There is a great and mutual sympathy existing among horticulturists as a body throughout the many sections in which it is divided, and this mutuality has been a great power in dealing with the troubles of the year.

Though the winter was cheerless and cold, and the rainfall much below the average, fruit trees of all kinds made a wonderful effort to do their best, and, indeed, the gardener's hopes were raised to a high concert pitch by the wealth and vigour of almost every kind of tree and plant. When one considers the droughty state of the soil last year, it was not less than marvellous that the universal tree life should have responded so well to the trying exigencies of weather. But so it was, and but for ill winds which, contrary to proverb, have blown no one good, there were splendid prospects held out from the garden and field almost everywhere. The great staple fruit of the British orchard made country drives and railway journeys intensely pleasant by their bounteous blossom; Pears, Cherries, and Plums were not less remarkable in the outburst of their floral spring dress. King Frost, and the not less powerful factor, "blight," have both asserted their prowess in a most determined manner. One advanced gardener was overheard to say that instances were not wanting where the air of fruit plantations was simply made odorous with quassia and its allies, and while he yet diligently applied it himself, his trees were not able to make any headway, nor did his effort combat the virulent enemy. He then turned his thoughts to an antidote of another kind, one applied to the roots instead of the heads of his trees—nitrate of soda. This had a marked effect in producing growth, and whether the growth advanced by this stimulant was too fast for the depredators to hold in hand, or the sap promoted by the action of the soda was too strong in flavour, is an item of theory on which thoughts may vary. Whatever its basis may be, certainly results were assuring, not so much for the present as the future crops in prospect. No doubt there are thousands of instances where trees, garden and orchard, are in a sorry plight, due to the persistent attacks of insect life, and Apples in particular have been hard punished. Plums, another great market commodity, were full of promise as regards flower, the trees healthy, and the blossom strong. The cold winds prevailing at the time, however, contributed more to their collapse than actual frost. One instance of the shortness of the crop in a remote country district occurs to me as I write: A grower accustomed to the gathering and sale of scores of sacks of Plums this year bewails a crop of 15lb.

In regard to Strawberries, who among the hosts of private and market growers can record an absolute triumph without at some period of the season a disturbed state of mind consequent on frost, cold winds and late season? The great bulk of the nation's crop was matured almost within the space of a fortnight's duration, early and late districts being brought into conflict, and a great depression of price was created by the fact of foreign fruit being ripe and sold at the same time. Truly there was a great and very severe shattering of the nerves of the grower, when comparisons were made with the wealth of his crop and the income derived therefrom.

Another great industry in the market world, the growth of Tomatoes and Cucumbers, finds records which are distinctly unfavourable. There were extremely bad times for setting of the fruits of these under glass, and outdoors they are late, and threatened with wholesale destruction by disease attack. Cucumbers have been erratic, mysterious diseases and collapse have been very rife. The cold and sunless season has contributed to much of this, and one almost wonders, when reflection is made on the absent sunshine, that vegetation has responded so well as it has done.

There may or there may not, be a shred of consolation in the fact that these alternate elevations and depressions of spirit have prevailed universally. In some seasons one hears of bounteous crops in one county or district, while in others a frost visitation, or some other local terror, annihilated both hope and prospect, which up to a certain period had been so favourable. This season the whole community have occasion for mutual sympathy, as it is not a common experience to find instances of the exemption of trouble in

some form or other. Thus the man of commerce, the professional, and the cottage gardener find themselves on the same platform, and are in mutual agreement as to the results of his season's labour and corresponding returns. It might be possible to fill a great space by the recounting of endless troubles and losses consequent on the trying season; one of which it is very difficult to match the record, for, from its early inception, it has dealt in reverse rather than favourable traits, and who can say what are the winter's prospects in regard to Potatoes and the corn harvests? At the time of writing, certainly, idols of the past are not advancing towards that desirable, rosy-hued ideal. Hope has always been, and still remains, a great factor in the horticultural mind, though often so hopelessly shattered.—W. STRUGNELL.

## Town Trees.

(Continued from page 236.)

### Species of Ash.

Common Ash (*Fraxinus excelsior*) often springs up from seeds in town backyards, and even obtains a footing on old walls, often giving rise to the thought, How do the seeds get there? The seedlings grow with astonishing vigour, and battle bravely and successfully with the impurities of the atmosphere and stifling heat of the confined spaces. The saplings are very healthy, and do splendidly until they reach the height of the first floor windows, or even higher. For some reason—perhaps they think their work is done—they then begin to go back, "smaller by degrees and beautifully less," age fast, lose leaves early in late summer, and are now, as the ladies say, not nice to look at on the trees nor tread upon on blue bricks. An aged town Ash tree, with its stem swollen yet not large in size, holed by black fungus, and tops dying back, with excrescences on the twigs and limbs, even holes in the trunks, of which billybiters and high-up starlings take advantage for nesting, is about one of the wierdest things in Nature.

The weeping Ash (*F. e. pendula*) never plays such like pranks, and is nowhere as regards affording delight to lovers of the grotesque. The variegated Ashes appear all too tender for windy places, though this certainly does not arise from dislike of smoke and fumes, as the disguised chlorophyll appears to confer resistant power on the possessors.

The Manna, or flowering Ash (*F. ornatus*) has borne the drought and heat more satisfactorily than the common Ash, excepting young trees of the latter, and as a low tree has claims on the town planter, especially the country, far too little requisitioned. Its greenish-white catkin-like clustered flowers are very beautiful, and the whole tree handsome. The drought and heat has been too much for it this season in densely packed places, the foliage being the reverse of handsome at the beginning of September.

Of the other Ashes, the green Ash (*F. viridis*) has still bright green leafage, not only in country towns, but in very smoky districts. It and the black Ash (*F. sambueifolia*) form fine heads, half balls, as standards, but with broad tops, and are more leafy than the common Ash. These species appear not to suffer from the vegetable and animal parasites which beset our native one.

### The Stately Beech.

Coming to the hard-leaved trees, the Beech (*Fagus sylvatica*) has contracted less Beech suckers (*Chermes fagi*) than usual, which often causes the leaves to have a very unsightly appearance and fall in showers during September. The purple-leaved Beech (*F. s. purpurea*), though liable, is less subject to fly attack than the common, but both are losing the leafage rapidly. The common Beech makes a good screen or high hedge in smoky towns, and thrives according to the winter, not summer, cutting in. But of all the Beeches for smoky towns, and even exposed situations, the copper Beech (*F. s. cuprea*) is the cleanest, and stands heat-reflected influences the best, the foliage not giving way until autumn is well advanced, especially on chalky soils. Still, not any of the Beeches are commendable for street planting as their roots run on the surface, thus rendering the ground very uneven.

The Spanish Chestnut (*Castanea sativa* or *vesea* or *vulgaris*) grows slowly at start, and surely, particularly on cold, heavy soils, and its foliage resists reflected heat influences remarkably well. The prickly involucre which enclose the fruits or nuts, and the rootstock swelling out are fatal objections to the Sweet Chestnut as a town street tree.—G. A.

(To be concluded.)



**Cattleya Luddemanniana alba.**

This chastely beautiful variety of the handsome *Cattleya Luddemanniana* was first exhibited at a meeting of the Royal Horticultural Society on September 12, 1899, from E. Duckworth, Esq. (gardener, Mr. W. H. Tindale), Shaw Hall, Flixton, when the First Class Certificate of the Orchid Committee was accorded. It is a true albino, inasmuch as it is wholly glistening white, save for a touch of soft yellow on the side lobes of the throat. Our illustration shows a flower of the natural size. The variety does not seem to be yet in commerce.

**Dendrobiums: Their Growth and Culture.**

(Continued from page 193.)

The Australian section contains some truly grand species. What would our Orchid houses be in autumn without the many gorgeous varieties of *D. Phalaenopsis*? So indispensable has this become that we wonder how we got along without it some few years ago before its reintroduction. And there are many others almost equally beautiful. All like a hot, moist, and light house, with hardly any shading, and they must be allowed to take their own way with regard to rest. If a plant commences to grow, even if it is in the depth of winter, it will be useless to try and prevent it, for such a proceeding will only weaken the plant. But when they start away in bright summer weather and rapidly swell up they are sure to be more satisfactory. Endeavour, then, by all reasonable means to keep them dormant until the conditions are suitable, and then let them grow as rapidly as possible. In the following list many fine species are included, but others are left out for reasons that are obvious. These will make an extremely interesting collection.

*D. aggregatum* is a close growing little evergreen species, bearing loose racemes of pretty primrose yellow flowers that change with age to a deeper tint. I have had nice specimens of this on rough blocks of Apple or Pear wood, where they have a pretty and natural effect, while the roughness of the bark suits the roots better than any description of made-up compost. It is an old inhabitant of our houses, having flowered in this country as far back as 1834. It is a native of India and China. *D. albo-sanguineum* is a larger and far more showy plant, introduced in 1851 from Moulmein. It has short erect leafy pseudo-bulbs, from near the tops of which the two or three-flowered peduncles issue. The flowers are very pale yellow, with two large crimson purple blotches in the centre of each, and nearly 3 in across, so that a well flowered specimen makes a very fine display. Basket treatment should be given it in the warmest house.

*D. aureum* is a well known and very beautiful species, sometimes met with under the name of *D. heterocarpum*. It has erect shortish stems and bears pretty creamy yellow flowers, with a few streaks of purple about the lip. Although this species is

not especially showy, it is one of the parents of many fine hybrids. Being widely distributed, naturally the flowers vary a good deal in colour, and several varieties are described. One of the best of these is *aurantiacum*, having flowers of a rich orange yellow. The treatment advised for the deciduous species will suit this well. *D. barbatulum* is not a showy plant, but bears pretty white flowers in crowded racemes; it is a native of southern Hindostan. *D. Bensoniae* is a very beautiful member of the deciduous group, having tallish erect stems, that in their season are wreathed with the pretty white flowers, spotted with maroon and orange. It is a native of British Burmah, where it was discovered by Colouel Benson, and sent home to Messrs. Veitch, of Chelsea, in 1866.

*D. bigibbum*, a member of the Australian section, is one of the finest species in the genus. It has tall, cylindrical stems, from the upper portions of which proceed the beautiful racemes of bright magenta purple flowers. It was discovered in the early part of the nineteenth century, having flowered at Kew in 1824, but it did not come into general cultivation until many years afterwards. It flowers in autumn. *D. Boxalli* is a very beautiful species sent home by the energetic collector whose name it bears in 1873, when he was collecting for Messrs. Hugh Low and Co. It has slender pendulous pseudo-bulbs or stems, along which the flowers occur in racemes of two or three, making a delighted show when in full flower. It must be treated as advised for the deciduous section, and is a native of Burmah.

A very striking species, quite distinct from all others, is *D. Brymerianum*, the flowers of which are deep golden yellow, the front of the lip being cut up into a deep hairy fringe. This remarkable species is a native of Burmah, and although of almost evergreen character, requires a thorough rest in winter, with only sufficient moisture to keep the stems from shrivelling. *D. capillipes* is a small growing plant, bearing short racemes of bright yellow blossom, something after the manner of *D. aggregatum*, and it thrives under the same conditions—H. R. R.

(To be continued.)

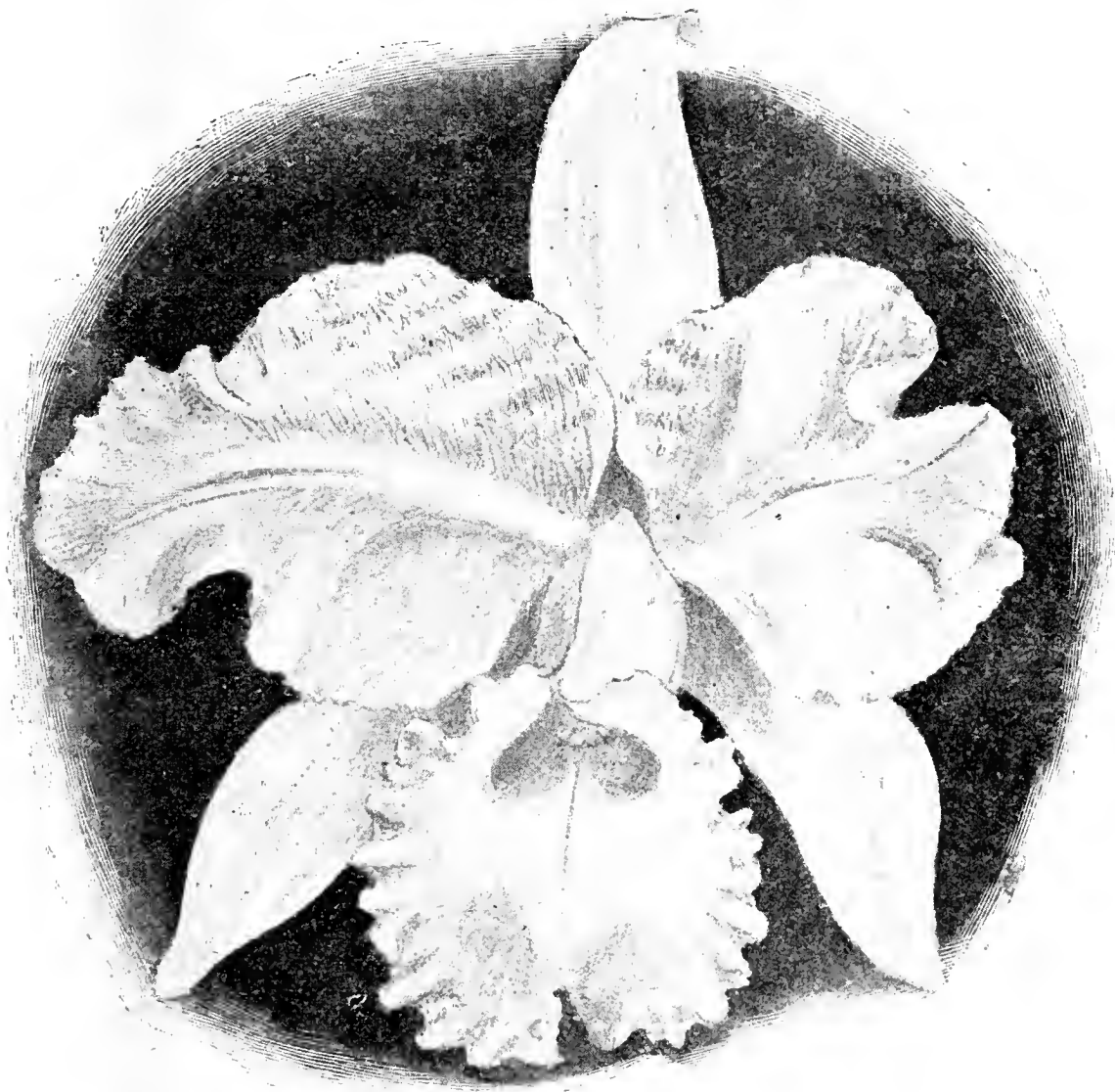
**Week's Cultural Notes**

The cool house is a very interesting structure just now, not on account of the number of flowers, but the growth that the plants are making. As I noted recently, the autumn is the time for giving new material to many of the *Odontoglossums*, *Oncidiums*, and some of the *Masdevallias*, all denizens

of the cool house, and where much of this repotting has been done it will be wise to allow a slightly closer atmosphere to enable the plants to take a fresh hold on the compost without difficulty. It must not be overdone, for no Orchid, and especially no *Odontoglossum*, can live for long in a close structure. The air they are so bountifully supplied with in their mountain homes must always be allowed in their confinement to the glass structures in which we grow them, but moister and closer conditions for a week or two after disturbance can do no harm.

On occasion the fact of disturbing the roots will cause a flower spike to appear in the centre of the new growth, and allowing this to develop and carry its flowers till they fade has been the ruin of many semi-established specimens. If the roots are running freely, and the plant shows no sign of distress, then by all means let it flower; but if, on the other hand, as often happens, the plant already shows signs of shrivelling when the tip of the flower spike appears, then nip that spike before it reaches the bud, or probably you will have to bemoan the loss of your plant.

Other plants come away with very large healthy growths, the roots revelling in the new compost, greedily sucking up frequently



**Cattleya Luddemanniana alba.**



supplied moisture, and growing like Leeks, to use a common phrase. These are they that delight the true practical grower. He knows that, although he may have longer to wait for his flowers, yet when they do appear the plants will have the requisite stamina to bring these to perfection without weakening themselves for the present or any future occasion. When the leaves are hard and rustling to the touch, when they spring back to their position on being brushed by the hand, they are all right; it is the flabby looking soft foliage that drops off wholesale in a dark dull winter, and is the sure forerunner of spot and other evils that attack cool Orchids. Sweet compost, healthy roots, and abundant air supplies conduce to the former results, and now is the time, by judicious ventilation and treatment, to strengthen and invigorate the plants against the coming winter.—H. R. R.

## APPLE AND PEAR ILLUSTRATIONS.

On page 285 are figures of (1) Apple Allington Pippin, one of Messrs. Bunyard's novelties, first introduced in 1896. It is a really excellent Apple for the table, and is in use from November to February. Fine specimens were seen at the Crystal Palace Fruit Show last week. (2) Borsdörfer is a Continental Apple, very highly esteemed in Germany, though hardly grown at all in this country. It is a free grower and very hardy, the fruit being yellow, and bright red next the sun, the skin also strewn with yellowish or brown dots. It was first grown in England in 1785. Apple Newton Wonder (page 287) was raised by Messrs. J. R. Pearson and Sons. It does not succeed in Kent, we believe, but is one of the best all-round Apples in other parts of the country. The Apple is now much appreciated, but we draw attention to it, believing that a good thing cannot be too well known. Pear President Barabé (page 286) is an excellent melting Pear of medium size. It is hardy and a good cropper. At Sawbridge-worth it is in favour.

## British Grown Fruit.

CRYSTAL PALACE, SEPT. 18TH, 19TH, AND 20TH.

It is said that the season's products are three weeks late this year owing to inclement weather. This, with the date of the show brought forward a fortnight, makes a difference to growers of five weeks as against a warm and favourable year. It is a wonder that so good an exhibition was possible following these sunless seasons, with their coldness, their storms, and rain.

Grapes were good on the whole: Apples and Pears had not the colour, though they may have been as heavy, as in a good year. A number of trade exhibitors, who on former years staged remarkably fine collections of fruit, or groups of trees, were not represented. The great storm which swept over Kent a day or two previous to the show may also have ruined the fruits of some intending exhibitors. Mr. Geo. Woodward, of Barnham Court, who generally stages some of the most superior samples on view at this show, was able to contribute a unique assortment of fruits, or, rather, parts of fruits—the remains of what had been handsome specimens previous to the devastating onslaught of hail which destroyed the whole of his fruit crops, and even riddled and tore to pieces his Strawberry plants, vegetables, and Chrysanthemums. The damaged fruits at the Palace were an object lesson in the risks and uncertainties of gardening, and it is the knowledge and probability of risks and losses which gives the greater satisfaction when labours are well rewarded and successfully crowned.

Messrs. Bunyard's display of fruit and pot trees deserved all the appreciation which the public accorded to it. Probably no finer effort has been made by this firm for some years. Messrs. Cannell and Sons had a new form of stand, or fruit-supporter, on their table. This was formed of a four-sided, erect central wooden rod, surmounted by a small wire basin for fruit. Fixed to the sides of this rod were horizontal brass wires, half an inch in thickness, with a circular basin for holding a plate at the end. These brass rods could be separated from the central support by simply lifting them out of the socket in which they are placed. Messrs. Peed and Sons used a neat little spring holder for their name cards, these being attached to the plates as a gentleman's tie-fastener might be, and the card was neatly held forward to the view.

A new feature of this exhibition were the collections of bottled fruits and jams. Never before has so large a display been seen. Practical demonstrations in the art of fruit bottling were given each day at 3 p.m. by Mr. Fowler to Fellows of the Society, but we were unable to attend to any of these. The Surrey Bee-keepers Society held an exhibition adjoining that of the Royal Horticultural Society.

In the way of novelties for another year, might it not be desirable to offer a prize for the best assorted collection of fruits of neglected native fruiting plants, or of plants with edible fruits, hardy in this country, and which are little known?

The Council of the Society, under the chairmanship of the President, Sir Trevor Lawrence, Bart., sat down to luncheon with the judges and others at 1.30 p.m. on the Thursday. In his remarks following the luncheon, Sir Trevor alluded to the bottled fruit, and remarked that, in his opinion, British bottlers had still something to learn if they are to compete with foreigners. He also briefly referred to the Horticultural Hall, and said that Baron Schröder taking the interest in it which he did, there was no need to fear that the scheme would not reach a satisfactory and successful issue. He proposed, after the loyal toasts, that of The Judges. This was ably and sensibly replied to by Mr. J. McIndoe, of Hutton Hall.

The Thursday, or first day of the exhibition, brought hosts of visitors, there being over sixty thousand people in the Palace and grounds during the evening. The arrangements in connection with the fruit exhibition were managed with the usual smoothness, the responsible persons being the Rev. W. Wilks, the Secretary; Mr. S. T. Wright and Mr. T. Humphreys, Superintendent and Assistant Superintendent of the Society's gardens; Mr. Reader, the Cashier, and Mr. Castleton, gardener to the Crystal Palace Company.

### Division I.—Gardeners and Amateurs.

*Collections of Indoor Fruit.*—The premier class for a collection of nine dishes, in six kinds, always makes a great show, and the exhibitors are particularly anxious to score in this class. On this occasion there were three competitors, but the quality of the produce, taken as a whole, appeared rather below par. Most of the Grapes were poorly coloured. The Peaches and Nectarines were, however, of exceptional character. Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, was placed first, staging good bunches of Muscat of Alexandria, fine in berry; Gros Maroc, clean, well-finished clusters. The Peaches Sea Eagle and Exquisite were grand in size and colour. A good dish of Victoria Nectarines, which possessed far more colour than is usual in this variety; a splendid dish of Figs, the variety being Brown Turkey; well coloured Washington Apples; a splendid dish of Marguerite Marillat Pears; Peaches Barrington and Gladstone, Clapp's Favourite Pear, and Dryden Nectarines being in excellent form; and a good Countess Melon completed the exhibit. Mr. J. Lock, gardener to Sir C. Swinfen Eady, K.C., Weybridge, Surrey, made a splendid second, and must have only just lost first place. The Grapes were grand, especially the Muscat of Alexandria, which were perfect in colour. Mr. J. Barson, gardener to the Earl of Sandwich, Hinchingsbrooke, Huntingdon, came third. The chief features of this exhibit were the Grapes Muscat of Alexandria and Gros Maroc, an enormous Countess Melon, and a good dish of Barrington Peaches.

The second collection of six dishes of ripe fruit, four kinds at least, Pines excluded, brought out four exhibits. Mr. W. Mitchell, gardener to J. W. Fleming, Esq., Chilworth Manor, Romsey, proved the victor. The varieties employed were Muscat of Alexandria, rather poor in colour, and Madresfield Court Grapes; a grand dish of Princess of Wales Peaches, Nectarines Pineapple and Pitmaston Orange, with Williams' Bon Chrétien Pears, forming a clean, well-finished exhibit. Mr. W. Harrison, gardener to Colonel Archer Houlton, Hallingbury Place, Bishops Stortford, was a capital second, having good dishes of Gros Maroc Grapes, Gladstone Peaches, and Clapp's Pear. Mr. W. Howe, gardener to Amy Lady Tate, Streatham Common, was third.

*Grapes.*—The classes for Grapes were well represented throughout, and although the colouring of the white varieties was not up to the mark, the blacks were good. Class 3 represented six distinct varieties of Grapes, three black and three white, and it is to be regretted there were only two entries. The first prize was awarded to Mr. W. Shingler, gardener to Lord Hastings, Melton Constable, and was in every way worthy of that exhibitor's reputation. The varieties were Gros Maroc, represented by good bunches of well coloured berries; Mrs. Pearson, good, shapely bunches, of fair colour, with moderate sized berries; Alwick Seedling, large in bunch, of excellent colour, but the berries would have been much better with a more severe thinning; Black Alicante, was large in bunch, but rather deficient in colour, the berries also showed signs of overcrowding. The Muscat of Alexandria were well coloured and large, though some of the berries were shrivelling; Gros Colman finished the exhibit. This variety was rather weak in colouring, otherwise good. The exhibit, taken as a whole, was undoubtedly a good one, and worthy of the show. Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, followed with a nice clean exhibit, but lacking in size when compared with the first prize exhibit. The best varieties were Muscat of Alexandria, rather small in berry, but well coloured; Barbarossa, enormous bunches of good colour, though rather small in berry; Gros Maroc, neat in bunch and berry; and Madresfield Court, which was small in bunch but otherwise good.

Black Hamburgh, three bunches, was represented by six entrants, and the general quality exhibited throughout was satisfactory, but there was nothing of a startling character in the exhibits. The first prize was awarded to Mr. W. Mitchell, gardener to J. W. Fleming, Esq., Chilworth Manor, Romsey, for three well coloured bunches of medium size, but decidedly small in berry. Mr. J. H. Goodacre was second with similar bunches, somewhat lacking in colour; while Mr. G. Lane, gardener to Miss Ridge, Highfield, Englefield Green, Surrey, was third, with slightly smaller bunches.

Mrs. Pince was represented by one exhibitor, Mr. W. Taylor, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill, who staged quite moderate clusters.

The three bunches of Black Alicante brought four entries, all of good quality. The first prize was awarded to Mr. H. H. Brown, gardener to G. C. Raphael, Esq., Castle Hill, Englefield Green, for splendid bunches of well coloured berries. Mr. W. Shingler followed with three bunches of perhaps double the weight, of good colour, but very unshapely. Mr. W. Taylor followed with pretty clusters, which were rather underthinned.

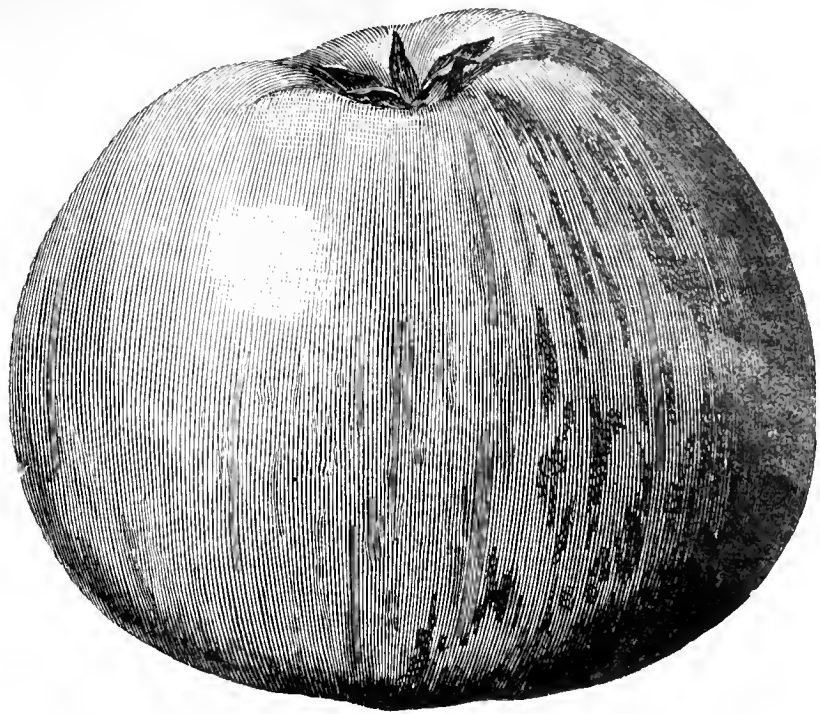
Class 8 was for three bunches of Madresfield Court, and the variety was represented by five entries, but none of them could be described as of first-rate quality, there being a lack of finish. Mr. W. Mitchell was placed first with good bunches, but the berries, though large, were rather green at the base. Mr. J. H. Goodacre was second with small clusters of better colour; and Mr. W. Taylor brought up the rear in satisfactory style.

The class for "any other black Grape," three bunches, is always an interesting one, and brought out eight entries. Mr. W. Shingler was placed first with immense bunches of Gros Colman, of excellent finish and colour. Mr. George Lane followed with three good bunches of Appley Towers, which were of excellent colour and well finished. Mr. W. Mitchell came third with Gros Maroc; these were fine and well finished.

For three bunches of Muscat of Alexandria, eleven competitors faced the judges. Mr. W. Lane, gardener to Sir E. D. Lawrence, Bart., King's Ride, Ascot, was placed first with three grandly coloured bunches, some of the best seen this season, perfectly golden. Mr. J. Lock, gardener to Sir C. Swinfen Eady, K.C., Oatlands Lodge, Weybridge, followed with large, well coloured bunches, showing signs of shrivelling; and Mr. C. Sutton, gardener to Earl Stanhope, Chevening Park, Sevenoaks, made a good third.

All the other white Grapes were lumped into one class, which did not do them justice. There were six exhibitors, but the class did not produce anything striking. Mr. George Lane was first with three large bunches of Chasselas Napoleon. Mr. W. Taylor was placed second with the same variety, though they lacked the regularity of the first prizewinner's; and Mr. J. H. Goodacre came third with the same variety.

The collections of thirty dishes of hardy fruit, distinct, grown entirely in the open, not to include more than twelve varieties of Apples or eight of Pears, brought out three collections. Mr. W. Lewis, gardener to R. B. H. Marsham, Esq., East Sutton Park, Maidstone, proved the victor. The varieties were The Queen,



Apple, Allington Pippin.

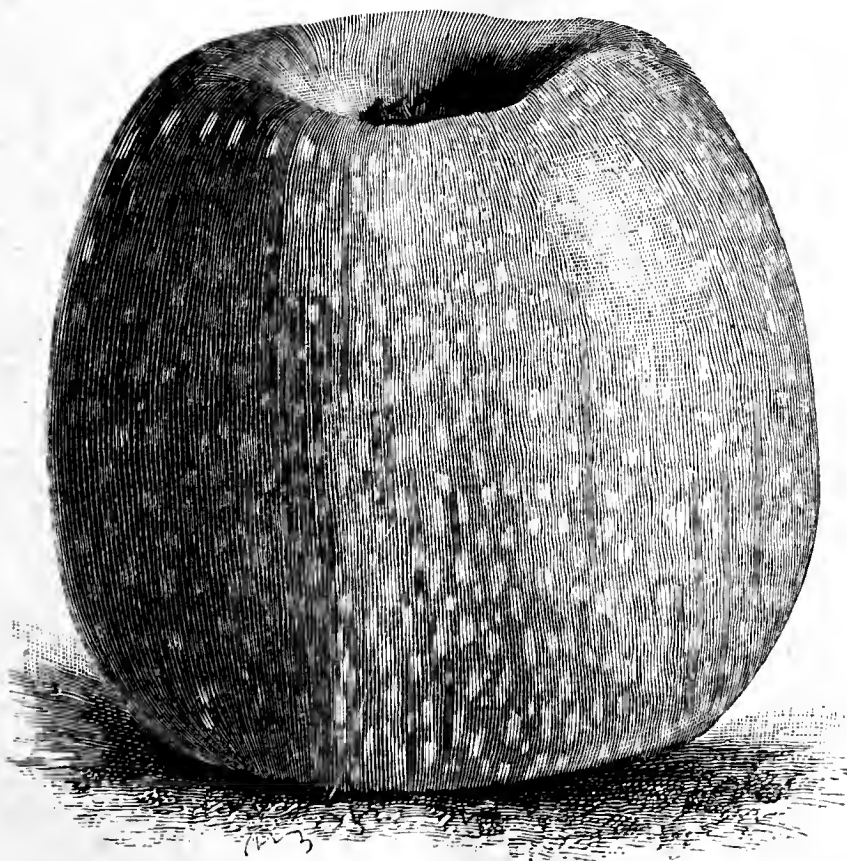
(See page 231.)

Lane's Prince Albert, Ecklinville, Lord Suffield, Warner's King, Peasgood's Nonsuch, Alfriston, New Hawthornden, Annie Elizabeth, Emperor Alexander, Lady Sudeley, and Cox's Orange Pippin, in Apples, all of which were of moderate quality. The Pears were about the same in quality, and were represented by Beurré Baltet père, Williams' Bon Chrétien, Souvenir du Congrès, Clapp's Favourite, Triomphe de Vienne, Marguerite Marillat, Pitmaston Duchess, and Fondante de Thirriot. The remaining dishes consisted of Morello Cherries, Plums Pond's Seedling (good), Monarch, President, and Golden Drop; a capital dish of Red Dutch Currants, Walburton Peaches, Pineapple Nectarines, and Brown Turkey Figs completed the display. Mr. E. Coleman, gardener to T. L. Boyd, Esq., North Frith, Tonbridge, made a capital bid for second place. The Pears were the chief feature, some of the most notable being Doyenné Boussoch, Marguerite Marillat, Pitmaston Duchess, Clapp's Favourite, and Beurré d'Amanlis. The best Apples were Ecklinville, Stirling Castle, Peasgood's Nonsuch, and Lord Derby. Pond's Seedling Plums and Peaches Bellegarde and Stirling Castle were also good. Mr. Berryman, gardener to T. Barnett, Esq., Knighton Grange, Chichester, made a good show for third place. The features of this exhibit were Uvedale St. Germain Pears, which were extra large, Peasgood's Nonsuch Apples, and the Plums Magnum Bonum, Grand Duke, and Kirke's Blue Gage.

The collection of orchard house fruit, consisting of twelve dishes, grown partly or entirely under glass, Grapes excluded, brought out but a poor entry, there being only two contestants. Mr. J. H. Goodacre, however, staged a fine exhibit, and won the first prize, hands down. The exhibit was remarkable for size and colour in every dish; this was clearly in evidence. The kinds employed were: Apples, Washington and Ribston Pippin; Pears, Souvenir du Congrès, Marguerite Marillat, and Souvenir du Conice. The Peaches were unusually fine and of excellent colour, good dishes of Princess of Wales, Exquisite, Royal George, and Barrington being in evidence. A good dish of Victoria Nectarine and a dish of Strawberries, the name of which was unreadable, completed the show. Mr. R. Edwards, gardener to C. A. Morris-Field, Esq., Beechy Lees, Sevenoaks, an old exhibitor in this class, was second, his best dishes being King of Tomkins County and Washington Apples, Pears Triomphe de Vienne and Clapp's Favourite. In Plums he had Coe's Golden Drop and Monarch, each conspicuous.

#### Division II.—Nurserymen's Classes.

*Hardy Fruit.*—The premier class in this division is one that always creates great interest. The schedule reads: "For fruit grown entirely in the open air, a space of 48ft run of 6ft tabling." Mr. H. Berwick, Sidmouth, Devon, came out at the top of the tree with a capital display for the season. The Apples and Pears were considerably below par, though they were clean and fresh. The Plums were, however, good. The best dishes of Apples were Bismarck, Potts' Seedling, Tyler's Kernel, Gloria Mundi, Sandringham, Wealthy, Warner's King, Peasgood's Nonsuch, Ecklinville Seedling, and Emperor Alexander. The most prominent Pears were King Edward, Gratioli de Jersey, Grosse Calebasse, Williams' Bon Chrétien (extra good), and Beurré Clairgeau; while the best Plums were Kirke's, Pond's Seedling, Victorias, and Orleans. Sea Eagle and Royal George Peaches were also staged. The exhibit was as good as could be expected as far as quality was concerned, and the arrangement was quite satisfactory. Messrs. H. Cannell and Sons, Swanley, were second



Apple, Borsdorfer.

(See page 284.)



with a well displayed exhibit, the foliage employed being most effective, and the flatness of the exhibit was relieved by pyramids of well coloured Apples arranged with appropriate foliage. The most noteworthy examples in Apples were Stirling Castle, Cellini, Lord Suffield, Peasgood's Nonsuch, Lord Derby, Bismarek, and Duchess of Oldenburg. Some good Plums were staged, with Nuts, "Crabs," Damsons, and examples of the Strawberry-Raspberry.

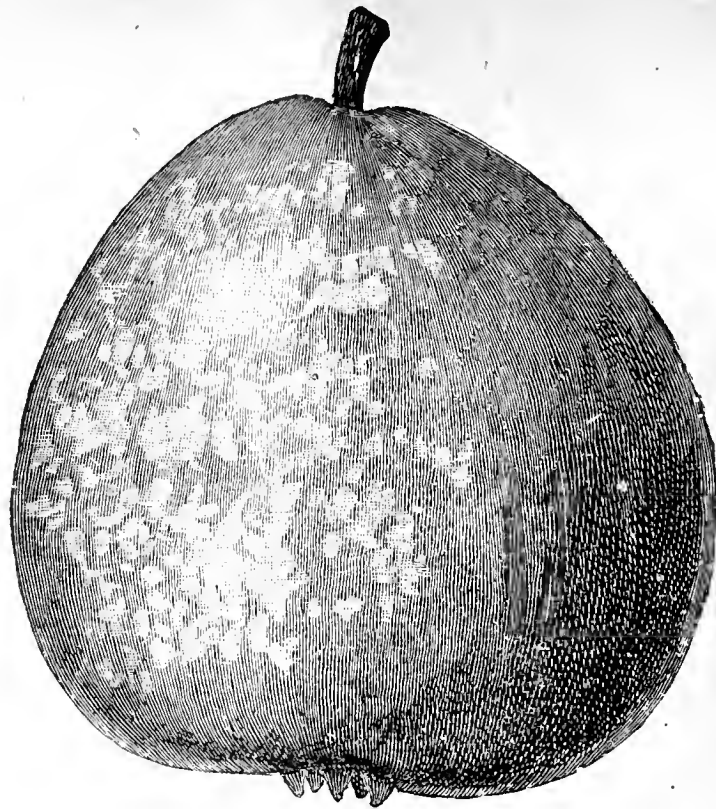
The class for 32ft run of 6ft tabling encouraged two exhibitors to take the field. Here Messrs. J. Cheal and Sons, Crawley, came out first with a creditable display of Apples, Pears, Plums, Peaches, and Nectarines, the whole exhibit being well arranged. The best Apples were Castle Major, Walthamstow Beauty, Warner's King, Jubilee, Gold Medal, and Bismarek; while in Pears Glou Moreau, Pitmaston Duchess, Flemish Beauty, Catillac, and Doyenné du Comice were most conspicuous. Of the Plums Pond's Seedling and White Magnum Bonum were of grand size. Peaches and Nectarines were also of good size. Messrs. J. Peed and Son, West Norwood, came in a good second, evidently relying on their Apples and Pears for their position. This exhibit was chiefly displayed in baskets and dishes, while a centrepiece was formed of a pyramid of Apples and Pears, with Palms at the corners. Some of the best dishes were Peasgood's Nonsuch, Lane's Prince Albert, Hawthornden, Gloria Mundi, Forge, Ribston Pippin, and Byford Wonder. The Pears were large and clean, a few of the most prominent being Pitmaston Duchess, Durondeau, Clapp's Favourite, Tardive de Solesnes, and General Todleben constituting the best feature of the exhibit. Plums were also represented by several varieties.

The class for 16ft run of tabling by 6ft wide seemed to suit the exhibitors this season, for four entered in this class. However, Mr. Geo. Mount, The Nurseries, Canterbury, so noted for his Roses, proved that the Kentish firm can also turn out good fruit on occasions like this, by winning the first prize. The exhibit was tastefully arranged, and the produce undoubtedly good, the colour in the Apples being noteworthy. Mention should be made of excellent baskets of Apples Peasgood's Nonsuch, Bismarek, Cox's Pomona, Royal Jubilee, Lord Suffield, Lady Sudeley, Worcester Pearmain, and Mère de Ménage. The finest baskets of Pears were Beurré Hardy, Williams' Bon Chrétien, Conference, Souvenir du Congrès, Margaret Marillat, Clapp's Favourite, Beurré Diel, and Beurré d'Amanlis; while good baskets of Pond's Seedling, White Magnum Bonum, Grand Duke, and Cox's Emperor were the best Plums, and a few dishes of "Crabs" completed the exhibit. Messrs. S. Spooner and Sons, Hounslow, made a good second, though they lacked the colour so prominent in the previous exhibit. Good examples of Royal Jubilee, Frogmore Prolific, Duchess of Gloucester, Sandringham, Gascoyne's Scarlet, Williams' Favourite, and Worcester Pearmain were good in Apples. A few dishes of Pears and some excellent Monarch Plums completed the chief points of this exhibit. Messrs. J. Laing and Sons, Forest Hill, made a tasteful exhibit for third place. The pieces of Cratægus Lelandi and Asparagus gave a pretty effect. The most noteworthy dishes and baskets in Apples were Pott's Seedling, Bismarek, Bellamy's Fillbasket, Royal Jubilee, Lord Suffield, Tyler's Kernel, Peasgood's Nonsuch, and Lord Derby; while good examples of Grosse Calebasse, Pitmaston Duchess, Marie Louise, Louise Bonne of Jersey, Clapp's Favourite, and Souvenir du Congrès were the most prominent Pears, and a few dishes of Plums and "Crabs" completed an effective display.

#### Division III.—Market Growers.

This division of the schedule started with class 19, for four varieties of cooking Apples in baskets or boxes of about 42lb net, the prizes being 30s. and 20s. respectively for first and second. With admirable samples of The Queen, Lord Suffield, and Bismarek, all of which were large, well-modelled samples, of good colour, without a blemish, the first award fell to Mr. H. T. Masson, of the Rectory Farm, Hampton Hill. Mr. Poupart, of Marsh Farm, Twickenham, was second with large green fruits of Warner's King, Lane's Prince Albert, and Peasgood's Nonsuch, but otherwise these were useful samples. There were only three entries.

For four varieties of the dessert Apples, weighing about 20lb, three bright lots from Mr. Geo. Chambers, of Mereworth, Maidstone, brought him the leading award. He staged Quarrenden, Cox's Orange Pippin, and King of the Pippins. Second out of four came Mr. Poupart with King Pippin, Worcester Pearmain, and Wealthy. Only two entrants showed for the two varieties of cooking Apples, the first place going to Mr. G. Chambers, of Maidstone. In the succeeding class for two dessert varieties, Mr. Mason, with King of the Pippins and Cox's Orange, beat his only opponent, who did not receive a prize. There was no entry at all in class 23, but four competed in the next, for two packages in two kinds of Pears, the premier award here falling to Mr. A. Wyatt, of Hatton, Middlesex, with a large flat boxful of Durondeau and Souvenir du Congrès. The samples were large and good, much better displayed, too, than those of Mr. Geo. Chambers, who came second. Three lots of Pears, of from twenty-four to forty-eight fruits, according to size, of any one choice dessert



**Pear, President Barabé**

(See page 284.)

Pear, were shown in class 25, and Mr. Poupart led, having Pitmaston Duchess, even and clean. These were packed in a flat, oblong box, with paper around each. Second came Mr. Wyatt, with a similar box, containing Souvenir du Congrès.

In class 26, for a collection of twelve varieties of Apples and six of Pears, distinct, eighteen fruits of each, to be laid flat on the table without dishes or baskets, only Vine or similar leaves allowed for decoration, and the space occupied must not exceed 16ft by 3ft, four creditable lots were displayed, the first and second being very nearly equal, as it seemed. Mr. Poupart, who led, had the larger fruits, and they were well spaced out, giving them an imposing effect. The succeeding award fell to Messrs. W. J. Lobjoit and Son, Heston Farm, Hounslow, with somewhat brighter samples, but less in size, as we remark. Poupart's Pears, in the varieties Clapp's Favourite, Marguerite Marillat, and Durondeau were very fine samples, as were his rosy-cheeked Worcester Pearmain Apples and very handsome Peasgood's. The Mère de Ménage were very irregular.

For a basket of about 28lb of cooking Plums, there were superb fruits of that grand sort Monarch on view from Mr. Poupart, giving him an easy lead. Lighter coloured, but also very good fruits of the same variety came from Messrs. Lobjoit, who were second, out of four. They were quite alone, however, in the next class, for a package of one dessert variety, staging a poor lot of Coe's Golden Drop.

Peaches were not numerous, though the two dozen fruits of Sea Eagle, packed in a box for market, with paper and cotton wool round each, and embedded in wood wool, from Mr. J. Gove, Albion Nursery, Polegate, Sussex, were really of very great merit, and a credit to him. After his, out of four, came Mr. W. J. Noy (gardener, Mr. W. Buckingham, The Homestead, Brentford, with Exquisite, highly coloured and large.

#### Division IV.—Open Air Fruits.

*Open to gardeners and amateurs only.*—The two classes leading off here, namely, 30 and 31, were unsupported. J. R. Brougham, Esq. (Mr. W. Jones), Wallington Bridge, Carshalton, and R. Marsham, Esq. (gardener, Mr. W. Lewis), East Sutton Park, near Maidstone, Kent, were equal first for twelve distinct dishes of Apples, eight of cooking and four of dessert. The finest samples here were Bismarek and Emperor, both for cooking, in Mr. Brougham's, with the dessert sorts Okera and Worcester Pearmain, in Mr. Marsham's. Okera is an oblong, brick-red coloured Apple, of distinction. In class 33, for six dishes of cooking Apples, only one exhibitor—Rev. O. L. Powell, Woburn Park, Weybridge—was forward. The samples were large and clean, but very green. Peasgood's and The Queen were well shown.

*Coming to Pears*, we found no entry for the half-dozen dessert sorts, and only one exhibit was contributed, this being certainly very creditable, from Sir M. Samuel's gardener (Mr. W. H. Bacon) of Mote Park, Maidstone. Evidently these had been well seen to, or had been out of range of the recent storm in that district. Beurré Mortillet was absolutely superb, and there were beautiful dishes of Directeur Hardy, Conference, Fondante de Thirriott, Doyenné Boussoch, Triomphe de Vienne, and Zephirin Gregoire (?). These were admirably staged, and it is unfortunate that there should have been nothing against such a collection,

that the honour of being foremost might have been experienced. Rev. O. L. Powell contributed the solitary collection of twelve dishes of dessert Pears, and had plump fruits of Doyenné Boussoch, Beurré de Mortillet, and Glou Morceau.

Again there was but one entry in class 37, for the nine dishes, Mr. W. Jones, of Wallington Bridge, being the exhibitor. His samples were very green, but unblemished in any respect. For the six, two were forward. C. Morris-Field, Esq. (gardener, Mr. R. Edwards), Beechy Lees, Sevenoaks, beat Alfred Benson, Esq. (gardener, Mr. W. Maney), Upper Gatton Park, Merstham, though the difference must really have been exceedingly slight. The former contributed lovely fruits of the useful Gansel's Bergamot and Triomphe de Vienne, and had a good dish of Clapp's Favourite.

Peaches furnished a wonderfully bright display of colour, and charming fruits were shown by Mr. C. Earl, gardener at Summerhill, Tonbridge, and Mr. C. Page, of Dropmore, Maidenhead, who led in classes 39 and 40 respectively. The seconds here were Mr. J. H. Goodacre and Mr. Joseph Sparks, of Grove Park, Roehampton Lane, W. The first of these classes was for six dishes, and the second was for three. The finer varieties (and all were from the open) were Sea Eagle, Exquisite, Thames Bank, Dymond, Royal George, Gladstone, Dr. Hogg, Princess, Bellegarde, Gros Mignonne, and Violette Hâtive. A dish of Walburton Admirable was shown, but these were poorly coloured, though large. In class 41, for a dish of one variety, a keen competition was shown, there being eight dishes. Mr. W. Humphries, gardener to the Earl of Chesterfield, of Home Lacey, Hereford, was a very good leader, having six fine fruits of Barrington, of large size and bright colour. Following him came Mr. J. Lock, gardener to Sir Swinfin Eady, K.C., Otlands Bridge, Weybridge, with Royal George, and Mr. W. Mitchell, gardener to J. W. Fleming, Esq., of Chilwell Manor, Romsey, with Sea Eagle, both equal seconds.

Nectarines did not make such a large display, but their colours were quite distinct and deep. For the three dishes, fruits to be grown out of doors, Mr. Earl, of Weybridge, beat Mr. T. Turton, of Sherborne Castle, Dorset—a good second. The former staged Darwin, Spencer, and Prince of Wales; the latter Stanwick Elruge, Rivers' Orange, and Spencer. Only three entered. For the one dish there were five contestants, but Mr. J. Lock, of Weybridge, led, with six of the handsomest Drydens at the show. Second came Mr. Goodacre, with a dish of unnamed fruits.

Plums were beautiful, and certainly of very high quality after such a season. Three lots of Plums were set up in class 44, comprising each three of dessert and six of cooking. The leading place was ably won by Mr. G. Grigg, gardener to the Earl of Ashburnham, from Battle. His contribution is well worth naming, and the varieties were White Magnum Bonum, Black Dymond, Transparent Gage, Rivers' Late Gage, Jefferson, Pond's Seedling, Belle de Louvaine, Cox's Emperor, and Grand Duke. These were carefully displayed, the fruits themselves being large, plump, deeply coloured, and covered with a fine bloom. With noticeably smaller fruits, but otherwise of equal merit, Mr. W. Pope, gardener to the Earl of Carnarvon, Highclere Castle, Newbury, formed a good second. He staged Bryanston Gage,

Kirke's, and Magnum Bonum. A poor dish of Victorias was included.

Mr. C. H. Colegate, of Catsfield Place, near Battle, led for the six (four cooking and two dessert), his best being Pond's Seedling. Second came Mr. T. Turton, out of four. Mr. Goodacre was second for three dishes of Gages, with translucent little sugary globes of Transparent Gage, Guthrie's, and the Bryanston's Late. In this class Mr. Colegate was disqualified from having Kirke's Plum, which is not a "Gage." Seven staged dishes of one variety, the leading place being accorded to Mr. Turton with dark amber and red coloured Jefferson's. Second place was occupied by Mr. James Vert, of Audley End, Saffron Walden, also with Jefferson. A perfect dish of Coe's Golden Drop received no award. For one dish of a cooking variety we find Mr. Grigg a good first with White Magnum Bonum; he was closely followed by Mr. Turton, with large specimens of Pond's Seedling, out of twelve contestants.

#### Division V.—District County Prizes.

This section of the schedule was devoted to special district county classes, and was open to gardeners and amateurs only. Class 49 led off, and this was open to Kent growers. For the six dishes of Apples the leading place was captured by Mr. E. Coleman, North Frith, Tonbridge, with large fruits of the usual exhibition favourite varieties; and second, Mr. R. Edwards, Beechy Lees, Sevenoaks, with a slightly less even lot, but good. For Pears in the same class, the first was again accorded to Mr. Coleman, with Mr. R. Edwards second.

Class 50, open only to growers in Surrey, Sussex, Hants, Dorset, Somerset, Devon, and Cornwall. Apples: Mr. C. H. Colegate, Catsfield Place, near Battle, formed an excellent first, with fine samples of Ecklinville, Warner's, Ribston, Peasgood's, and Bramley's Seedling. Second place was filled by Mr. Turton with brightly coloured dishes of Worcester Pearmain and good Peasgood's. There were four entries. In the Pear classes Turton was leader, and Coleman a favourable second. Their best dishes were Beurré Mortillet, Clapp's Favourite, Triomphe de Vienne, and Beurré Superfin. The colour was good in each of these.

The succeeding class was for growers in Wilts, Gloucester, Oxford, Bucks, Berks, Beds, Herts, and Middlesex. Three lots of Apples represented the western men, and here we found Mr. Strugnell, the able gardener to Colonel Vivian, at Rood Ashton, Trowbridge, in the van, with Mr. C. Page, of Dropmore, as second. Mr. Strugnell had moderately sized fruits, but unblemished and rather bright. His best were Peasgood's, Annie Elizabeth, and Mabbott's Pearmain. The Dutch Codlin, too, was exemplary. For Pears the first award was accorded to Mr. W. H. Bannister, of Cote House, Westbury-on-Trym, and a charming display they made. Few fine samples were on the boards. Beurré Hardy and Doyenné Boussoch were typical. Second came Mr. C. Page.

In class 52, open only to growers in Essex, Suffolk, Norfolk, Cambridge, Hunts, and Rutland, there was only one exhibit of Pears (no Apples), and that came from Mr. W. Harrison, gardener to Colonel Archer Houbton, Hallingbury Place, Bishops Stortford.

The next class was open only to growers in Lincoln, Northampton, Warwick, Leicester, Notts, Derby, Staffs, Shropshire, and Cheshire. For Pears the first prize fell to Mr. W. H. Divers, gardener to the Duke of Rutland, Grantham, with rather moderate sized fruits and very green. He also led for Apples. Second for Pears came Henry Knott, Esq., J.P., of Stamford, who also was so placed for the Apples, showing a pretty dish of Queen Caroline variety among others.

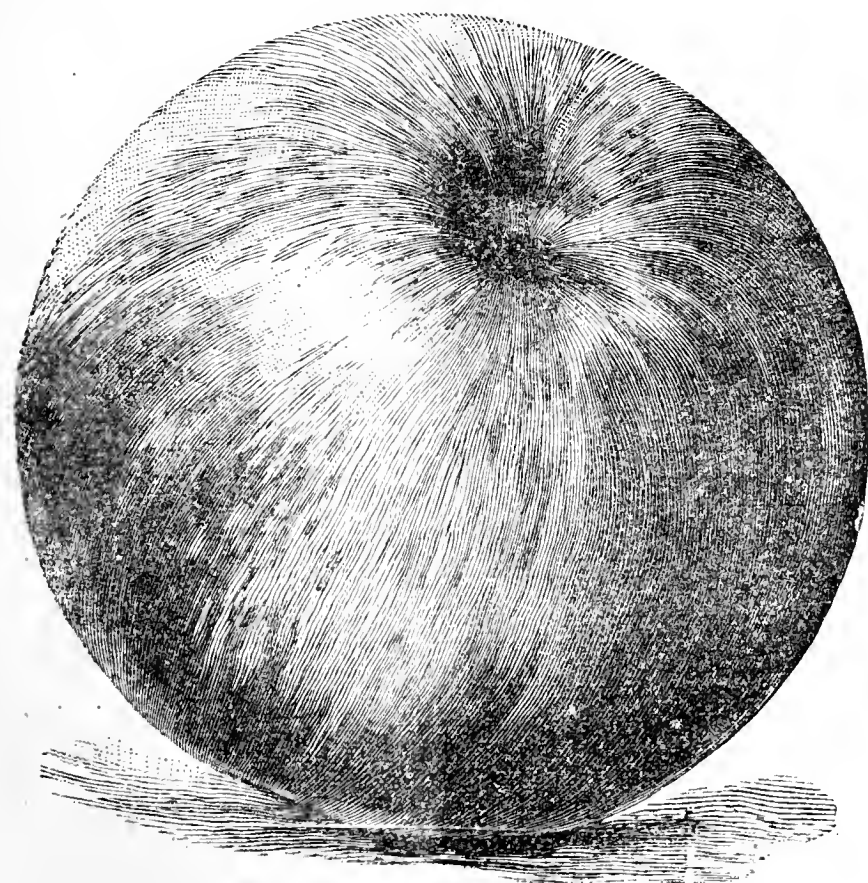
Class 54, open only to growers in Worcester, Hereford, Monmouth, Glamorgan, Carmarthen, and Pembroke. Mr. J. Rick, gardener to G. H. Hadfield, Esq., Moraston House, near Ross, led for Apples, and included here a splendid six of Lord Derby, Bramley's Seedling. Following him came Mr. J. E. Jones, of Kynaston, Ross, with fine fruits. Mr. Rick, was foremost for Pears, having beautiful fruit of good size, colour, and general finish for the season. Second came Mr. W. Humphries, gardener to the Earl of Chesterfield, with large but greener samples. There were two lots of Apples and three of Pears.

The Welsh growers did not contribute anything that was at all noteworthy here. For six dishes of Apples the leading award went to Mr. H. Forder, of Ruthin Castle, N. Wales, with undersized, irregular, and green fruits. Mr. Fox, of Highmead, Llanybyther, S. Wales, came a close second, out of three. Mr. Forder led also for Pears, but these, too, showed the effects of a bad season. Mr. Fox had ruddy samples.

Number 56 of the schedule was open to growers in the six northern counties of England, and in the Isle of Man. Three collections were forward, with Mr. Geo. Picker, gardener to J. R. Pease, Esq., Hesslewood, Hull, at the head. No second. Mr. McIndoe, gardener to Sir Joseph Pease, Bart., of Hutton Hall, beat Mr. Picker for Pears.

Scotland was represented only by one entry of Apples and another of Pears, both from Mr. Day, gardener to the Earl of Galloway, at Garliestown.

From Ireland there came a bright six dishes of Apples, in-



Apple, Newton Wonder.

(See page 284.)



cluding a choice set of The Queen, and also of Colonel Vaughan, shown by Mr. J. G. Weston, gardener to Viscount Duncannon, Bessborough, Piltown. The Channel Islands did not contribute this year.

#### Division VI.—Single Dishes.

Single dishes of fruit grown in the open air. Open to gardeners and amateurs only. The prizes in each case are 7s. for the first, and 5s. for the second.

#### CHOICE DESSERT APPLES.

*Class 60.—Adam's Pearmain.*—Of this three dishes were shown, and the first award fell to F. W. Thomas, Esq., of Wainock, Polegate, Sussex: the second to Jeremiah Coleman, Esq. (gardener, Mr. W. P. Bound), Gatton Park, Reigate, the former with excellent samples.

*Allington Pippin* brought only two dishes. Mr. W. Harrison, gardener to Col. Houlton, at Hallingbury, beat Mr. John McKenzie, of Linton Park, Maidstone, both with rather undersized and green samples.

*American Mother* had three dishes to its credit, the best lot being from Mr. McKenzie, of Maidstone, and the second from Mr. Turton.

*Benoni.*—Only two entries; the premier from Mr. F. W. Thomas, of Wainock, and the second from Mr. McKenzie.

*Blenheim Orange* and *Cardinal* had none to their credit, but

*Claygate Pearmain* had four entrants to support it, though they were poor and very green. Mr. D. G. Melvor, of Ossett Gray, Grays, Essex, first, and Mr. A. J. Carter, of Billingshurst, Sussex, second.

*Cox's Orange Pippin.*—Alas! for Cox's, that this famous Apple should only be shown in four lots. Mr. Bound, of Gatton Park, led, followed for second by Mr. T. W. Herbert, of Nutfield Court, Redhill, who must have been very close indeed.

*Devonshire Quarrenden.*—This fine showy Apple was six times shown, the best coming from Mr. Bound, and the second from Mr. G. Crabb, Park House Gardens, Addlestone. All the samples were creditable and well coloured.

*Duchess' Favourite* had but three dishes representing it. Mr. Crabb, with beauties, was a good first, and Mr. Melvor second.

*Egremont Russet* is generally seen in force at the Crystal Palace, but two dozen fruits were all here shown on this occasion. Mr. J. McKenzie beat Mr. C. Earl, the first with very creditable Apples.

*Fearn's Pippin* was not at all seen, and

*Gascoyne's Scarlet*, with three dishes of fruit, made a poor show. Mr. Earl had first with bright samples, and second, Mr. T. Clinch, of Sittingbourne.

The beautiful *Golden Reinette* was minus a single entry, nor was the old *Irish Peach* on view.

*James Grieve.*—Two here entered, and though somewhat close, yet Mr. F. W. Thomas, of Polegate, had the advantage, and beat Mr. W. Harrison.

*King of the Pippins* is another popular dessert variety, but only five came forward now. Mr. J. Lock, of Weybridge, was a moderate first, and Mr. Earl second.

*King of Tomkin's County* was four times on view, the best coming from Mr. Alex. Smith, the Convent Gardens, Roehampton Lane, and second, Mr. G. Grigg.

*Lady Sudeley.*—Wonderfully rich and showy fruits were forward, and those from Mr. W. Mitchell, of Chilwell Manor, Romsay, could not have staged finer samples, even in a sunny year; following him came Mr. Melvor.

*Lord Burghley.*—There were three lots here, each very poor indeed. Mr. A. J. Carter, of Billingshurst,

*Mannington Pearmain.* with four dishes, was well content. Mr. E. Colman had better samples than Mr. Chas. Ross, of Welford Park.

*Margil.*—Poor Margil! A winsome tot, with only the first and second prize lots representing it. Mr. McKenzie was first, and Mr. C. Ross second.

*Red Astrachan.* a good Apple, did not appear here; and what's the reason?

*Ribston Pippin* proved to be braver than most of its associates, seven lots having faced the judges. Mr. Grigg, with large, green samples, was in the lead, the next to him being Mr. C. Page. One lot, from under glass, was disqualified, of course.

*Worcester Pearmain* brought ten lots, and rosy they were—or, rather, crimson. Mr. W. H. Bannister admirably led, with Mr. J. Rick second, both showing very fine fruits.

*Any other variety, not named above,* brought forward seven entries. With *Golden Russet*, Mr. John McKenzie was placed foremost; Mr. Alex. Smith, of Roehampton, second, with Beaumont's Winter Reinette; and Mr. T. H. Slade, gardener to Lord Poltimore, of Poltimore Park, Exeter, third with *Wealthy*, which surprises us that there should not have been a class for this good variety.

#### Choice Cooking Apples.

*Class 86.—Beauty of Kent,* a handsome fruit; had none on this occasion by which to refresh the memory of it.

*Bismarck.*—Four entrants staged, but Mr. Alex. Smith won with very good fruits, and second, Mr. John McKenzie.

*Blenheim Orange* (large fruits).—Mr. E. Coleman, of Tonbridge, led out of three with green samples, Mr. J. E. Jones being second.

*Bramley's Seedling* had but two contributors of it, the awards falling to: First, Mr. A. Bassile, of Woburn Park, Weybridge, and second Mr. Wm. Lewis, East Sutton Park, near Maidstone.

*Cox's Pomona*, with but two, made no display. Mr. McKenzie led, against Mr. T. W. Herbert, of Redhill.

*Ecklinville* was well shown seven times, the best set coming from Mr. F. W. Thomas, of Polegate, with clear, smooth, large fruits; second came Mr. Alex. Smith.

*Emperor Alexander.*—Mr. J. McKenzie had the only dish, and these were really good.

*Frogmore Prolific.*—Of two, Mr. D. McAinster, Leeds Castle, Maidstone, was first, with fairly coloured, good Apples; Mr. McKenzie second.

*Gascoyne's Scarlet* (large fruits).—Three displays, and one lot from under glass was ignored from having been grown under glass, bright though it was. Mr. D. G. Melvor led, and Mr. Turton followed.

*Golden Noble* was anything but golden; indeed, as green as the newest grass, and only one entry was staged, that from Mr. McKenzie.

*Grenadier* had three dishes in its support, though only moderate in quality. Mr. D. McAinster beat Mr. McKenzie.

*Hawthornden, New.*—For this, Mr. E. Coleman won against Mr. T. W. Herbert, his only opponent.

*Lane's Prince Albert.*—Eight samples were seen. The first set, from Mr. A. Smith, were good, clean fruits, and well before those from Mr. C. Ross.

*Lord Derby* was twice shown, and very coarse and green. Mr. Alex. Smith beat Mr. Melvor.

*Lord Grosvenor.*—Six dishes of this were on view. Mr. A. J. Carter was first, and Mr. McKenzie second.

*Lord Suffield.*—Only three of these seen, and the monotonous repetition of a prizewinner's name—Mr. A. Smith—appeared on the first card.

*Mère de Ménage.*—Mr. McKenzie was here alone with fair samples.

*Newton Wonder.*—For eight fruits in class 104, Messrs. J. R. Pearson and Sons, Lowdham, presented the money prizes, as they also did in the succeeding class for the same variety. Class 104 was opened only to exhibitors living in Cardigan, Radnor, Shropshire, Stafford, Warwick, Northampton, Bedford, Cambridge, Essex, or counties further north. Mr. W. H. Divers, of Belvoir Castle, Grantham, was the only exhibitor from the north.

*Newton Wonder*, open only to exhibitors being south of the fore-mentioned counties.—Seven contested, and Mr. F. W. Thomas of Polegate, with good fruits, was accorded the lead. In the second place came Mr. W. Lintott of Marden Park, Surrey, also with good samples, but smaller.

*Peasgood's Nonsuch* had but three dishes in its favour, the premier lot from Mr. J. McKenzie being really models of high culture. Mr. W. Lewis of East Sutton Park followed a fair second.

*Pott's Seedling.*—Only two lots of these were on view, Mr. McAinsh leading with very creditable fruits.

*Royal Jubilee.*—Mr. Chas. Ross was foremost for six, he staging showy and large Apples. Out of seven, Mr. C. Sutton, Clevening Park, Sevenoaks, was second.

*Sandringham.*—Three lots were here, the best being from Mr. Ross.

*Stirling Castle* had six dishes, which is far below what this fine Apple usually brings forward. Mr. W. P. Bound was leader, and Mr. Ross followed.

*The Queen.*—Again Mr. Bound was in the van with a dish of the most showy samples in the show. Mr. A. Smith was a fair second, but his fruits were far behind in point of colour.

*Warner's King.*—Five dishes of this large sized variety were before the visitors, the judges awarding first to Mr. J. McKenzie with huge specimens, though very green; second, Mr. A. Smith, also with good samples.

*Any other variety not named above.*—Again the redoubtable Mr. Alex. Smith was leader with handsome and really fine fruits of Tyler's Kernel. Mr. McKenzie, with Queen Caroline, made an excellent second, his fruits being clear, smooth, of good size and colour.

#### Single Dishes—Pears.

In this division the Pears made even a poorer show than did the Apples. Taking the dessert Pears foremost, for *Beurré d'Amanlis* there were six, which, of course, was good. Mr. A. Bassile beat Mr. W. Lintott. The best dish of *Beurré Diel* was from Mr. A. J. Carter. *Beurré Dumont* was only once shown, and the second prize was awarded, Mr. E. Coleman being the recipient. Fair specimens of *Beurré Fouqueray* came from Mr. E. Coleman, and out of six entrants for *Beurré Hardy*, Mr. J. Rick led off, Mr. Bannister following.

Four lots of *Beurré Superfine* came up, Mr. Turton here leading, and Mr. Bannister being second. *Clapp's Favourite* was better shown than almost any other, there being six dishes of it. First was Mr. Lintall and second Mr. Grigg. The first lot were lovely coloured and very large as well. For *Comte de Lamy* Mr. T. W. Herbert staged nice little samples. Three sets of *Conference*—a fine Pear—were on view. Mr. J. W. Barks, Castle Hill, Bletchingley, out of three, was first.

*Doyenné du Comice*, which, according to Mr. Bunyard, is "The Best Pear," had but one dish as representing it, and this came from Mr. Barks. *Doyenné Boussoch* brought five sets, the finer examples being staged by Mr. J. Rick, and the next best by Mr. Bassile. The russet-brown and characteristically shaped

Durendeau, a good pot Pear, had three dishes, Mr. Turton heading fairly, and Mr. Bannister following for second. Emile d'Heyst, with five, was seen to advantage, the foremost samples being from Mr. T. H. Slade, of Poltimore Gardens, Exeter, and Mr. E. Colman second. For Fondante d'Automne there were three contestants, the premier card being accorded to Mr. W. Hawe, of Streatham, with nice smooth fruits, second Mr. Coleman.

Dr. Jules Guyot had no representative. Ten dishes were forward at the call of Louise Bonne of Jersey, the first place being filled by Mr. F. W. Thomas with fair samples; second came Mr. McAinsh. Marguerite Marillat is a handsome variety, and three lots were entered, Mr. Slade beating Mr. Thomas, having very good samples of this early Pear. Marie Louise brought eight competitors, but Mr. Rick again proved the winner, Mr. Turton following. The fruits were very green. For Pitmaston Duchess, Mr. T. Horsey, of Charlton House, Sudwell, Salisbury, led, with large but green samples. Mr. J. W. Barks was second, out of eight. The pretty and quaint little Seckle had four purple sets in its favour, Mr. Chas. Ross coming to the front, and was followed by Mr. Coleman.

Souvenir du Congrès with four found Mr. Rick leading, Mr. Bassile being second. The fruits were large but not very shapely, and they were green. Thompson's had little size or colour. Out of two Mr. C. Page was first. The delicious Triomphe de Vienne had but three dishes, Mr. Turton, with really good fruits (large and well coloured), beating Mr. F. W. Thomas. Williams' Bon Chrétien brought three entrants, Messrs. J. Rick and T. W. H. having the awards, the former with well coloured Pears. The last class here, that for "any other variety," was supported by only three competitors, the leading place falling to Mr. E. Coleman with Aspasia Ancourt; second, Mr. P. W. Bound, with splendid Gansel's Bergamotte; and third, Mr. Bassile, with Summer Fraunce.

#### Division VII.—Miscellaneous.

Class 139.—Home preserved or home bottled British grown fruits. Open. This exhibit must not occupy a space greater than 8ft by 6ft, and must not be built up more than 2ft high in the centre. Jams in clear glass jars or bottles; bottled fruits in clear glass bottles; small quantities of fruits, preserved, dried, or evaporated, in any other way may be included, but all alike must be British grown and British prepared. First prize, Gold Medal; other prizes at the discretion of the Council. Messrs. Austin and Co., Kingston-on-Thames, who are the possessors of a patent and secret bottling process, were placed first, their exhibit displaying well preserved and finely coloured fruit samples. The second award we were unable to find; and third the Swanley Horticultural College. There were five displays.

Class 140 was for home preserved or home bottled British fruits. Wholesale firms excluded. This exhibit had to include both jams and bottled fruits—from twelve to eighteen 1lb or 2lb clear glass pots or bottles of jam, including at least four different kinds, and from twelve to eighteen bottles of fruit, including at least four different kinds. Small quantities from ½lb to 1lb of any British grown fruit preserved at home in any other way may also be added. Any of the pots or bottles in each exhibit will be opened by the judges at their own selection. Everything exhibited must have been preserved by the exhibitor. First prize, a Silver Cup presented by the Countess of Warwick; second, £3. The Horticultural College, Swanley, were first; Mrs. A. Bassnet, Shirley, Croydon, second; and third, the Lady Warwick Hostel, Reading.

Class 141 was for exhibits of a dozen bottles of bottled fruits (including four different kinds at least), bottled and shown by exhibitors who do not sell their produce or in any way work for the trade (wholesale or retail), but only and entirely for their own household consumption. First prize, £3; second, £2. Allanson Bailey, Esq. (gardener, Mr. W. Elliott), Mount Pleasant, Farningham, was first; Mr. J. Bushnell, Sandling, Maidstone, second; and third, Mrs. Banks, Hasland Hall, Chesterfield.

For an entry in class 142 (miscellaneous), Mrs. W. H. Plowman, Heath Cottage, Beddington Corner, Mitcham, received an award.

#### Non-competitive Exhibits.

Undoubtedly the largest and finest collection of fruit on view from one firm was that of Messrs. Geo. Bunyard and Co., Maidstone. The tabling occupied the whole length of the show area. Pot trees were staged at the back, these including nicely trained specimens of Apples, Pears, Plums, and the Cherry Guigne de Winckler, an October fruiting variety, bearing heavy clusters. Cox's Emperor Plum and Peasgood's Apple showed up well. Among the dishes of fruit on the table were Cox's Pomona, Ben's Red, James Grieve, Bismarck, Lady Henniker, Royal Jubilee, Allington, Ribston Pippin, Queen Caroline, Lady Sudeley, Duchess of Gloucester, Preston Hall, Washington, Colonel Vaughan, Evagil, Lord Derby, Lord Grosvenor, The Queen, and Beauty of Kent Apples; Doyenné Boussoch, Uvedale's St. Germain, Fondante d'Automne, Dr. Joubert, and other Pears; Melon Little Heath, Peaches, Nuts, Damsons, Plums, and Crabs. The group was the object of the greatest interest during the run of the show.

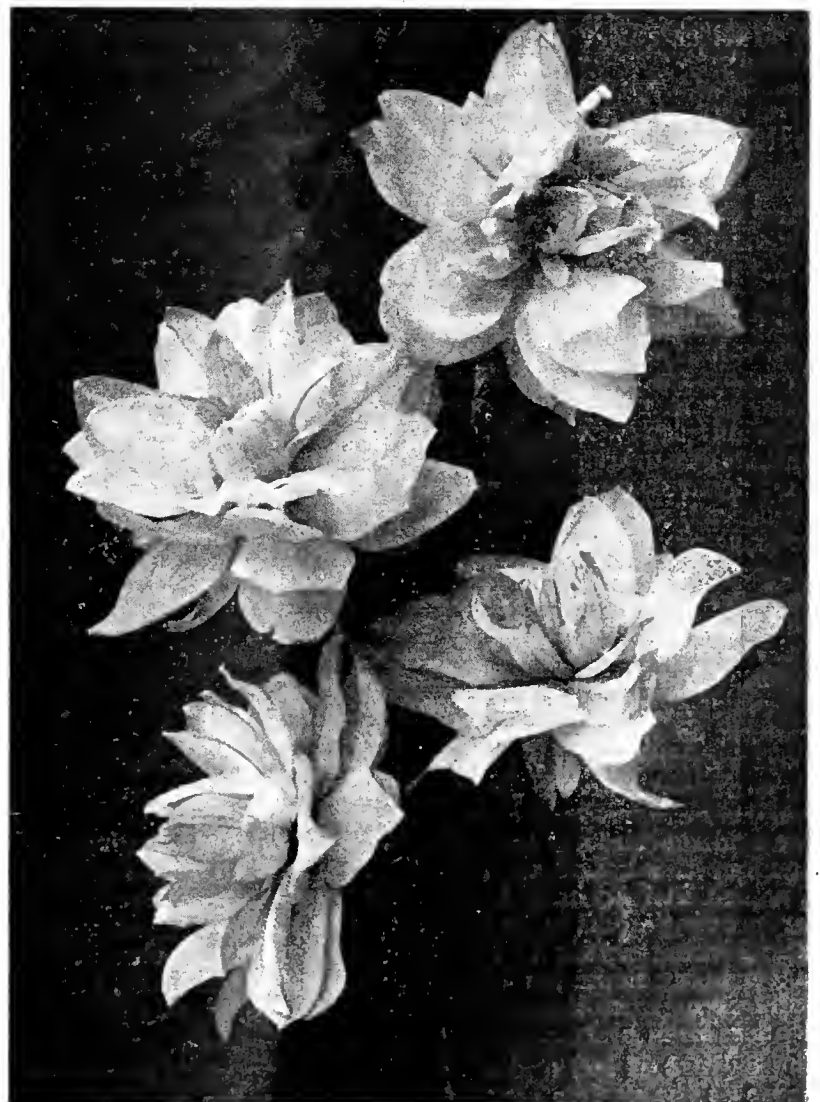
A large number of trade exhibits, apart from fruit, were contributed. Messrs. Cutbush and Son had a collection of cut Dahlia blooms, and so also had Messrs. Cheal and Sons. Messrs. D. S. Thomson and Son, of Wimbledon, set up a group of the new double flowering Gypsophila paniculata. Mr. Will Taylor, of Hampton, had Roses, and a group of these also came from Paul and Son. Messrs. Cannell and Sons had a conical mass of their gorgeous Cannas, while hardy flowers came from Messrs. Pritchard, T. S. Ware, Limited, and Geo. Bunyard and Co. Barr and Sons had Montbretias, Roses, Amaryllis Belladonna, Phloxes, Delphiniums, Asters, and Physalis Alkekengi, &c. Messrs. J. Peed and Sons had double tuberous Begonias and hardy flowers. From Messrs. B. S. Davis, of Yeovil, there also came superb tuberous Begonias. Amongst the doubles there were the following, which are very fine: Mrs. Shortland, yellow; W. Sparshott, rich crimson; Ernest J. Davis, Marchioness of Bath, white; Captain Henderson, scarlet-crimson; Mr. J. Chamberlain, white, edged with lilac; General Baden-Powell, rich orange-scarlet; and Mrs. Lyons, lilac-blush.

Messrs. Wells and Co., Earlswood, had a group of early flowering Chrysanthemums, including Horace Martin, golden; Rosie, red; Orange Masse; Goacher's Crimson; and Victor Mew, white. Mr. J. Russell, Richmond, had a group of Euonymus and Ivies; Messrs. Laing had hardy flowers, and so, too, had Ladhams, of Shirley Nurseries, Southampton; Mr. C. Turner had Dahlias.

A collection of Apples and other fruits came from Messrs. Hugh Low and Co. Duchess of Oldenburg, Lord Suffield, Loddington, and Allington Pippin were large and handsome. They had also superb Peaches and Plums. Nuts were also included. Messrs. J. Veitch and Sons, Limited, Chelsea, staged a group of pot Pears.

#### THE DOUBLE WHITE POET'S NARCISS.

This, the Gardenia-flowered Narcissus, is variously catalogued. It is the double white poeticus, and is also called Narcissus alba plena odorata—the odorous double white, under which name the Messrs. Webb and Sons include the variety, and through them we are enabled to reproduce the illustration on this page. The lovely sweet-scented, Gardenia-like flowers are much prized for cutting, and growing 15in in height, they have stalks of a useful length. Experts recommend that this Narcissus be planted early in a good, deep, cool soil, not too dry.



Double White Poet's Narciss.



## Currants.

To establish a plantation of Currants, red and white, or black, the bushes should be planted in autumn, just as soon as the leaves have fallen or are falling. Black Currants do well, as a rule, on stiff and moist ground, which ought also to be moderately rich, while red and white succeed on drier ground, which must be well drained, deeply dug, and freely enriched. The distance apart in planting may be the same, namely, 5ft or 6ft apart.

Red and white Currants can be grown as cordons on walls or fences; but black Currants are only profitable grown as bushes. Red and white Currants are pruned the same, but black Currants

distances on the wall or trellis. If grown on a north or east wall the fruit will ripen and hang late, thus prolonging the supply. Currants make abundance of fibrous roots near the surface, hence mulchings of manure are beneficial, and constitute the best method of affording nutriment.

Black Currant bushes will succeed in situations where it may not be advisable to grow other berries, yet they should not have an ill-drained, waterlogged position, but a rich, holding, moist soil. The bushes may be grown with and without short main stems. In the latter case they will throw up strong sucker-like growths from below ground, while in the former all growths have to be secured from the various parts of the permanent branches originating from the central main stem. Both systems may be adopted, but the former is the most general.

The system of pruning differs from that of red and white Currants. It consists in simply cutting out the oldest growths and retaining the young, on which the best crops are produced the following year. There must not be any crowding, and the bushes should be kept well balanced. Retain the growths always at full length. The pruning may be carried out after the crop has been gathered, or it may be deferred until the winter. Do not dig about the bushes, but maintain vigour by liberal annual mulchings. Some of the best varieties of Currants are:—

| Red.            | White.         | Black.              |
|-----------------|----------------|---------------------|
| Fay's Prolific. | White Dutch.   | Baldwin's Champion. |
| Red Dutch.      | Transparent or | Carter's Champion.  |
| Raby Castle.    | Versailles.    | Lee's Prolific.     |
| Comet Red.      |                | Boskoop Giant.      |

—MAN OF KENT.



Japanese Wineberry.

are treated differently. Red and white varieties should be encouraged after planting for the bushes to produce an equal number of stems, which must be considered as permanent. Five or six main stems make a good bush.

The first season they grow vigorously. At the winter pruning shorten one-third, and during the next season side shoots will form, which in July may be summer pruned. At the following winter pruning shorten these to within an inch of main stem, and the leading shoots to 9in or 10in, the annual shortening of the latter being necessary to induce side shoots to push, but after the full extension of the main stems is secured, closely prune back the leaders each season.

The culture of red and white Currants on walls is practically the same as the system adopted for Gooseberries, or as that just detailed for bush Currants, the main stems being secured at equal

## THE WINEBERRY.

This Japanese novelty (*Rubus Phoenicolasius*) can be grown successfully in this country, although some growers do not speak highly of it. The berries, as our illustration shows, are Mulberry-shaped, juicy, and produced in profusion. They make a delicious preserve. As a rule, we find the growth to be robust, and the plants fruit in a very satisfactory manner, the foliage and ruddy stems being strikingly ornamental. Planted like Raspberries, or by a wall, the Wineberry grows well. It is a fine climber for large spaces.

## Raspberries.

Raspberries are delicious fruits, and on good ground are profitable, as if the canes are well ripened there is seldom complaints of a failure of the crop. Good, rich ground is indispensable, and before planting it ought to be deeply trenched and freely manured.

In selecting planting canes it is desirable not to be guided by the strength of the canes, but by the quantity of roots of a fibrous character. Small, thin canes will, therefore, be found to possess the best roots. Plant such as these at the end of October or in November, and in spring cut them down closely to the ground. Nothing is gained by planting stronger canes and expecting them to fruit the first season. They will not do so to any extent, while at the same time vigorous growth of young canes is checked.

Raspberries, if grown in lines, may be planted 1ft apart in rows 5ft asunder. Wires must be stretched along the lines for training the growths upon. Attach them to stout posts fixed at each end of rows. They may be 5ft high. Three lines of wire will be sufficient. Another system of training Raspberries is in clumps of three plants, each clump 3ft apart. Drive a stout stake down in the centre. Each season train in about six of the strongest canes and cut out all weakly. Prune to the height of the wires or stakes. Immediately the crop is gathered each season it is a good plan to cut out at once the whole of the canes which have borne the crop, thus leaving more room for the new canes to become well ripened.

Never dig between Raspberries, for by doing so a vast number of fibrous roots may be destroyed. Strong weeds, if becoming established, may be forked out, and, of course, suckers between the rows ought to be removed. Heavy mulchings of rich manure may, every season, be given to Raspberries during the winter season, and frequent applications of liquid manure, when available, afforded in summer. The liquid will also be beneficial in winter to well established rows.

Like other small fruits Raspberries are subject to the depreda-



**Fuchsia, Western Beauty, over 8ft. high**

(See page 293.)

tions of birds when the fruit is ripe, hence give protection by fish netting, arranging a temporary light framework to support it. Autumn fruiting Raspberries produce fruit on the young wood of the current year, and should be cut down close to the ground in February. Thin out the shoots which result.

*Varieties of Summer Raspberries.*

|                    |                       |
|--------------------|-----------------------|
| Superlative.       | Baumforth's Seedling. |
| Carter's Prolific. | Norwich Wonder.       |
| Red Antwerp.       | Yellow Antwerp.       |

*Varieties of Autumn Raspberries.*

October Red and October Yellow.

E. D. S.

## Notes on Gooseberries.

Gooseberries are usually profitable to grow, as it is seldom they will fail to fruit, and also to give abundant crops if managed well. Perhaps the largest and heaviest crops may be obtained from bushes grown in a free manner, but cordon trees also bear freely. They are admirable for growing on a wall or fence.

The cultivation of Gooseberries is simple, requiring, in the first place, good ground deeply worked and freely manured. The young trees should be planted in autumn, giving 6ft space every way between the bushes. In planting spread out the roots as far as they will extend, working some good soil among them. They should start strongly into growth in spring, previously to which a little regulation of the branches may be carried out. Shorten them well back the first year if enough branches have not been secured to form a good bush. Thin out weakly growth. When fair-sized bushes have been obtained, further severe shortening should not be practised, but adopt the method of thinning out, leaving plenty of young wood. Some of the best crops are to be grown in this way.

It frequently happens that the trees during the winter are denuded of their buds by bullfinches and other birds, hence it is desirable to protect them from these onslaughts. An effective method is to wind cotton over the bushes, black cotton being the best. Dusting the bushes with lime and soot tends to repel many. Some growers gather the branches together and tie in

a bundle for the winter, while others leave the winter pruning until the last possible moment. The best method of all, but rather expensive in the first place, is to surround the plantation with lin mesh wire netting on iron supports.

*Cordon Gooseberries* are grown against walls or fences. U shaped trees are best for this purpose, and may be obtained ready shaped at nurseries, for the purpose. These should have a short main stem, be furnished with abundant roots, and a main stem must be encouraged from each side. The side shoots they produce in summer must be pruned back in July to five or six leaves, and further shortened in winter. This pruning is practically all that is required, and may be continued annually. Afford liberal mulchings of manure each winter.

The varieties of Gooseberries are numerous, especially the show Gooseberries. They comprise, green, red, white, and yellow. The trees are mostly of spreading growth, and to produce large fruit must be kept thin. The best among the show varieties are:—

| <i>Green.</i> | <i>Red.</i>    | <i>White.</i> | <i>Yellow.</i> |
|---------------|----------------|---------------|----------------|
| Admiration.   | Bobby.         | Antagonist.   | Catherina.     |
| Greenock.     | Clayton.       | Careless.     | Drill.         |
| Matchless.    | Companion.     | Freedom.      | Highlander.    |
| Ocean.        | Dan's Mistake. | Lancer.       | Leader.        |
| Shiner.       | London.        | Nonpareil.    | Leveller.      |
| Telegraph.    | Rifleman.      | Postman.      | Ringer.        |
| Thumper.      | Speedwell.     | Transparent.  | Stella.        |

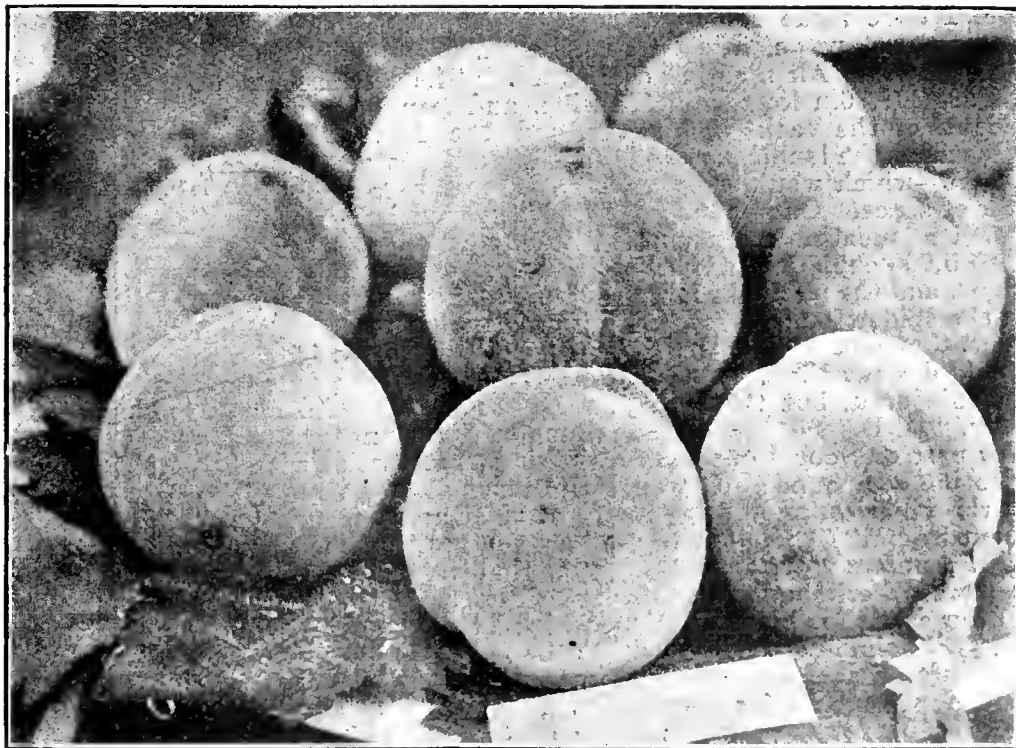
For general purposes, including culinary and as dessert when ripe, the following are admirable varieties:—

| <i>Green.</i>       | <i>Red.</i>         | <i>White.</i> | <i>Yellow.</i> |
|---------------------|---------------------|---------------|----------------|
| Berry's Early Kent. | Crown Bob.          | Shiner.       | Golden Drop.   |
| Pitmaston Green.    | Ironmonger.         | Whitesmith.   | Early Sulphur. |
| Gage.               | Red Champagne.      | Velvet White. | Rumbullion.    |
| Green Gascoigne.    | Keen's Seedling.    | Hedgehog.     | Yellow Ball.   |
| Roseberry.          | Warrington.         | Early White.  |                |
| Langley Green.      | Whinham's Industry. |               |                |

— E. DENNIS.

## SEA EAGLE PEACH.

Eight model fruits, though shown in a greatly reduced size, are presented on page 291. These were from Mr. W. Strugnell, gardener to Colonel Vivian, Rood Ashton, Trowbridge, Wilts, the first prize in class 45 at the recent show held by the Bath Horticultural Society. The photographer, Mr. E. Rye, of Bristol, added a note when sending the photograph from which we worked saying, "They" (the Peaches) "were of grand colour, as may be judged by their 'coming out' so dark on a bromide print." We should like to note that Mr. Strugnell is a regular contributor to the Journal, and a thoroughly successful, all-round gardener. Sea Eagle was well staged at the Crystal Palace fruit show last week. "It is a handsome late variety, ripening in the end of September and beginning of October, in the open air. It is one of the best for the open air."



**Fruits of Sea Eagle Peach.**





### Clematis Jackmanni.

In the *Journal* for August 21 you try to explain the cause of Clematis Jackmanni growths dying off in answer to "Wyvern, Twickenham." I was much interested, and should like to give my experience. My next door neighbour planted out, from a pot, Clematis Jackmanni against the wall of his house, facing south, in autumn, 1900. It kept what foliage it had when planted, but eventually died down. The owner thought it dead, was impatient, and ordered another to be put in, in autumn 1901. I advised his man not to disturb the one put in the previous year, but to plant at a little distance. He did so. The result is, the one planted in the autumn of 1900 threw up a shoot from the ground this spring, and is now 7ft high, and a pretty sight of bloom on it, while the one planted in 1901 has died down out of sight, similar to the first. It will interest me to note next spring if the second plant throws up from the ground, the same as the one planted in 1900. I have known other varieties of Clematis behave in the same way.—A. B., Hants.

### An Object Lesson.

I recently saw a croquet-lawn made out of a field at the end of last winter, which presented a fine object lesson as to the value of the "top spit" and the infertility of raw soil. The turf was weedy, so it was determined to pare this off and take it away, level the ground, and sow it with grass seed. The ground to be levelled had a fall of about 1ft or more from west to east; and, as, on digging, the soil at the depth of 1ft—a fair light loam—looked (to perhaps rather inexperienced eyes) "just the same" as the top-spit, the whole was levelled by simply spreading it from west to east. It "looked" all right when levelled, rolled and raked, and in good order for the seed, which came up well and evenly in the spring; but really, of course, all the fertile earth had gone from the west side, and there was but little left till half way across. A change of appearance, despite the admirable growing weather, soon came on the young grass, and at August there was not to be seen a really good and healthy plant of grass on the east side, getting gradually worse and worse till on the extreme west it was very poor and yellow, and hardly a plant at all. Of course, this was because it was absolutely "raw" soil on the extreme west, with more and more of the top spit all across the eastern boundary. It would have formed quite an instructive picture for a horticultural class.—W. R. RAILLUM.

### Red Spider on Vines.

Since the discussion between "H. D." and myself a few weeks ago, I have made the following experiment. A small pit containing Crotons on which were some red spider has been vapourised with XL All nicotine compound. The dimensions of the pit are 11ft 6in long, and 6ft wide, and lean to in shape. The height of the back wall is 4ft, and the front, 2ft 6in. By measuring the length by the breadth and the total by the average height—which would be about 3ft—there are roughly 200 cubic feet of space. One of the largest sized vapourisers was used, and sufficient nicotine compound put in the cup to vapourise a house with 5,000 cubic feet of space. The operation was done on a still night, and the plants in it were examined next morning, and most of the spider found alive and active. A plant each of Adiantum cuneatum and Pteris were put in the pit to see if the fumes would destroy the fronds. The Pteris and Crotons were found to be uninjured, but the Maidenhair Fern fronds were blackened. Now, "H. D." will you kindly tell me how you managed to destroy this pest on your Vines by vapourising the vineries with XL All nicotine compound? It would also interest me to know the size of the vineries, and the quantity of nicotine compound used, for I must admit I quite fail to see how you accomplished the feat so easily, unless it is, as you suggest, that we have a class of very "hardened criminals" in this part of Essex. I am sending to the Editor a leaf for his inspection, which I hope he will examine and give his opinion on. But I should like to say I hope "H. D." will not infer that I am attempting to disparage the merits of XL All; far from it, for personally, I think no other preparation equals this for the purpose it was sent out for, viz., the destruction of green and black fly and thrips. Perhaps other readers of the *Journal* will give "H. D." and myself, through these columns, a few words relating to their experiments in dealing with this

pest.—A. JEFFERIES, Moor Hall Gardens, Harlow, Essex. [The red spiders were found to be active on the Codium (Croton) leaf sent to us.]

### Gardeners' Education.

In the course of a letter on this subject the undersigned says:—"In the fulness of my ignorance I had supposed that industry and uprightness, coupled with a thorough knowledge of practical gardening, would fit me for a post as head gardener, but, thanks to your recent correspondents, I now perceive I am quite unfit for the task, and the most I hope for is to obtain a post under one of the learned and superior gentlemen gardeners.—YOUNG GARDENER."

### Indian Pronunciation.

The matter is somewhat trivial, but a wrong impression may have been created which I beg the favour of correcting. In the *Journal of Horticulture* for August 14, page 151, in a note of mine on the Sequoias of California, the word Tuolumne, was incorrectly syllabled. It should be read as if Tu-ol'um-e, the accent being on the second syllable, and the n mute. It is an Indian name, one of the counties of the state being so named, and a grove of Sequoias being so designated. Se-quoy-ah is also an Indian name, and the proper generic name of this tree and of the sempervirens, although often known in England as Wellingtonia. There are but two species, gigantea and sempervirens, both aptly so called, the former from its unrivalled size, and the latter from its tenaciousness, even the woodman's axe and the sheep-herder's fire being unable to destroy it. Cut down a Redwood (S. sempervirens) tree of 15ft to 25ft diameter, and a whole grove of saplings will spring from the stump. Not so with S. gigantea. Let the puny hand of man apply the axe to him, and it is finished! his life's work is done. And what a life! For thousands of years he has weathered the storms of the world, and one may well imagine that the Fallen Monarch, with a whole troop of United States cavalry riding on his trunk would rather be so than to live, like his mate, and see daily, during the summer months, a coach-full of giddy tourists passing through a hole cut for the purpose! Sequoia gigantea is found only in the Sierra Nevada mountains, and then in isolated groups. Sequoia sempervirens abounds in the Coast Range, some fifty or sixty miles west, but running parallel to the Sierras. This range averages about 3,000ft, while the other is more than double, many mountain peaks reaching above 12,000ft, and some above 15,000ft. About seventy-five miles north of San Francisco, in Mendocino County, and on up through Humboldt County, near the coast, are still great forests of sempervirens. Will it "live for ever," or will the greed, the short-sighted greed of man, destroy it also?—LEONARD COATES, Napa, California.

### Staging Dahlias and Other Flowers.

Not once, or twice, but very often, have we expostulated with exhibitors both in print and by speech, in regard to the very slovenly method which many adopt in their staging of blooms for competition at shows. What incongruity they display to have taken serious trouble to cultivate their products for a whole year, it may be, and be at so much attendant trouble and expense in exhibiting, and yet to neglect the final effort. Perhaps it is that some exhibitors cannot stage well even when they try their best. For our own part, however, we think there could be shown ability, were exhibitors on the whole to exert their judgment and their observation more than they do. On this subject we quote from a correspondent, himself a leading Dahlia grower and prizewinner, who writes, saying:—"It seems to me that after all the labour and care required to produce good flowers, it is well worth while to devote the additional time required in setting them up to the best possible advantage. The extraordinary carelessness displayed by some amateurs in this respect spoils the effect of the entire class, to my mind, and I wish you could induce them to take more pains. Apart from this subject, I may add that I have seventy-three plants this year, of twenty-three varieties, which I grow in my back garden, which runs N.-N.W. and S.-S.E., and measures 130ft by 50ft, surrounded by a wall 6ft high. I grow them at the north end with a row of Scarlet Runners across the middle of the garden, and south of the plants for protection against wind. No one touches my ground or plants from beginning to end of the year but myself, and I have no help of any kind, and I may add that I grow these lovely flowers purely for the love of them, and not specially for exhibition, my object being to obtain a constant supply of the finest possible blooms for the table, from mid-July till end of October. I cut them before breakfast every day during the season, and place them in heavy stone vases, in a large, dark airy cellar, where they remain till 7 p.m., when I set them up for the table, carrying them down on trays to the cellar again at bed time, where they remain till the next evening. In this way they keep fresh for from three to five days, according to the temperature."

# NOTES & NOTICES

## A Specimen Fuchsia.

The variety figured on page 291 is Western Beauty, and which was the best specimen plant at the Bath horticultural exhibition this year. The plant figured was shown by Mr. G. Tucker, of Hilpertton Marsh, who is a noted grower there. This plant was over 8ft high. Trowbridge is the centre at which to see these gigantic Fuchsias—living testimonials of patient cultural care.

## The King's Gardens at Windsor.

The alterations at the King's gardens at Windsor, says a daily paper, are now nearly complete. New and commodious apartments have been built for the employés, including bath rooms, bed-rooms, and a recreation room. New glass houses have been added, and up-to-date methods adopted. The magnificent Grape Vine near Cumberland Lodge will yield from 1,800 to 2,000 bunches this year.

## Attar of Roses.

In Eastern Roumelia, the yield of attar of Roses this year is from twenty to twenty-five per cent. less than in 1900. Prices have fallen to an extraordinary degree in the foreign markets. The main cause for regret is that the Rose fields belong to peasant proprietors who are also distillers of the essence, and the ruin of the industry means their undoing. But no attempt to revive it is promising of success, owing principally to the indifference of consumers abroad. Some Frenchmen have started a large distillery at Karlovo, but there does not appear to be much chance of it doing well. The Rose is itself more cultivated than ever, the commoner kinds for massing, the rarer for individual blooms, but the commercial purposes of the queen of flowers have fallen into the background.

## Plants on an Irish Bog.

To "Knowledge" for September, Mr. R. Lloyd Praeger contributes an article which deals with bog vegetation, in the course of which he writes: "The oozy sinuous pools are filled with Sphagnum, and here and there with the Bog Bean, *Menyanthes trifoliata*; the edges of the pools are luxuriously cushioned with a variegated growth of Sphagnum, and these edges are the favourite haunt of two of those wonderful fly-devouring Sundews, *Drosera rotundifolia* and *D. anglica*. In the shallower pools, or on bare mud, the White Beak-rush, *Rhynchospora alba*, grows in tufts, and its farther-creeping relative, *R. fusca*, fills portions of the pools with an erect growth of bright green stems and brown inflorescence. . . . The conditions under which this plant-group lives are remarkable. The spongy crust is perennially saturated with water, which circulates very slowly. In consequence the soil is badly aerated, and the plant-remains which form the crust do not become thoroughly oxidised, and soluble humus compounds remain in solution in water. The plants can with difficulty absorb by their roots water charged with these substances, and thus it comes to pass that while the bog is physically very wet, physiologically it is very dry. In the midst of plenty the plants are actually starving. . . . Exactly the same difficulty, it may be remarked, occurs in salt marshes, where the water is charged with sodium chloride. In both cases the plants meet it in the same way, by checking transpiration, and thus saving up the water which they absorb. Thus they assume characters similar to those displayed by plants of deserts and dry places—xerophytic characters, to return to a term which we have had occasion to use before. These are seen in the smallness of the leaves of the Heath, for example, as well as in the curious backward-rolled character of their leaves, as well as of those of the Cranberry, Crowberry, &c. In other cases the leaves are protected by a thick impervious cuticle or skin, or by a close growth of hairs. Another peculiarity in the conditions under which the bog flora grows is that in the water-logged soil there are no bacteria present, which are so useful in breaking up the complicated nitrogenous compounds contained in the dead plant matter; hence nitrogen as a plant food is scarce. This may help to explain why the Sundews, which are essentially bog plants, have hit upon the extraordinary manner of obtaining nitrogenous food—the capturing, killing and digesting of small animals."

## The Favourite Carnations.

In our paragraph on this subject last week, Germania was referred to as the popular buff variety. Germania, of course, is one of the best yellows, but Benbow should have been mentioned in its place.

## Appointments.

Mr. A. W. Culloch, as head gardener at Heythrop Gardens, Chipping Norton, Oxon. in succession to Mr. Downing, who has resigned owing to ill-health. Mr. Culloch has been for the last ten years head gardener at Newstead Abbey, Nottingham. \* \* Mr. John Williams, for the past five years foreman at Baron Hill Gardens, Beaumaris, has been appointed head gardener to J. Marshall Dugdale, Esq., Llwyn, Llanfyllin Montgomery.

## Proposed European Flower Trust.

Trusts are springing up like mushrooms. The latest proposal of the kind is for the formation of a "floral" trust, the "Société Florale de Cannes." According to the Paris correspondent of the "Financial Times," this company proposes to control the flower market of Europe, and is now soliciting £160,000 from the public to carry the scheme into operation. "Our object," says the prospectus, "is an ambitious one; we desire to form a European natural flower trust." The combine, we are told, already makes an annual turnover of £560,000, on which the profits are said to be enormous.

## Hailstorm in Kent.

Not for many years has a more severe and disastrous storm than that which passed along the valley of the Medway from Tonbridge to Maidstone on Wednesday, the 10th inst., been experienced in England within recent times, except the tornado which devastated Essex five years ago. At East Farleigh there were hailstones 5in in circumference, and in places they lay 18in in depth. In the two villages of Teston and Watlington alone it is estimated that nearly £4,000 damage was done. Colonel Warde, Member for the Medway division, who resides at Barham Court, Teston, had 1,650 panes of glass in his greenhouse smashed; another property owner lost 6,000 Peaches. Hard Pears were cut to pieces by the hailstones, and all trees were stripped of their foliage. It is feared that many of those who suffered loss were uninsured.

## The Canadian Wheat Belt.

Might not English agricultural newspapers do more than they are now doing to keep that magnificent area of Wheat land in Western Canada thoroughly British, by encouraging the emigration of English people to their own territories? Millions of acres of the finest agricultural land in the world are now being offered by the Canadian Government (160 acres ahead, free) to all bona fide settlers, and yet English people are looking on while Americans—who generally know a good thing when they see it—are rushing over the border by thousands to seize the opportunity and, of course, the future reward. It grieves me to see what is now a fine British province being settled so largely by Americans and foreigners. I am not a capitalist, or I would soon take out a few thousand of good British blood to settle upon these fine farming lands—I mean take some of those who are now treading on each other's heels in the Old Country, scrambling for a living? But why don't they go on their own account? Are they afraid they should be going from civilisation to barbarism in a wild, unknown land? Twenty-two years ago I left England, and made, what to me was largely, a plunge in the dark. I have never regretted the step I then took, for I have learned to love Canada and her people, and hope to return again before very long. In the meantime, if my twenty years of experience in Canadian life can throw any light upon the step other people may now be contemplating, I will gladly do what I can to help them by answering any questions, to the best of my ability, provided those who ask them will enclose stamped and addressed envelope to my private address, Alexandra Park Road, Wood Green, N. To-day there is plenty of the choicest land to be had for next to nothing. Five years hence it may be in the hands of aliens. Now is the time if English people are going at all. Why not make up parties of say 100 each and go out and settle by townships in company together? Why not a large party for next March? I am willing to do all I can to help.—(Rev.) GEORGE E. LLOYD, Deputation Secretary (for Canada), Colonial and Continental Church Society, Wood Green, N.



## Peaches and Nectarines.

### Their Classification and Selection of Varieties.

The different varieties of the Peach, distinguished by a downy skin, and Nectarine, known by a smooth skin, are not readily defined from the appearance of the fruit alone. The following classification is that adopted by the late Dr. Hogg, LL.D., in his standard work on the fruits and fruit trees of Great Britain—the well known and popular "Fruit Manual," and is founded on

I.—The flowers being either large or small.

II.—The leaves being serrated without glands, or having either globose or reniform glands at their base.

III.—The fruit having either flesh which parts readily from the stone, or flesh clinging to the stone.

The flowers distinguished as large or small, in some cases nearly approach each other in respect to size, but the small flowers have the petals more of an oval shape than the large, and their colour is different. The large flowers are deeply coloured at the base, whilst their disc becomes nearly white towards the margin. The small flowers, on the contrary, have their petals more deeply coloured at the margin than they are in the middle.

The glands, if any, are situated at the base of the blade of the leaf or on the petiole, but the distinctions between globose and reniform are not always obvious, yet the globose glands are somewhat pedicellate, and raised above the margin of the leaf, whilst in the reniform or kidney-shaped glands they are usually indented in the margin.

The term *freestone* is applied to fruit with a melting flesh or that parting readily from the stone when the fruit is halved; whilst the term *clingstone* is applied to a fruit that may not be so halved, from the flesh adhering or clinging to the stone.

### PEACHES.

#### I.—FLOWERS LARGE (Fig. 1, A).

##### Leaves without glands (Fig. 1, D).

#### A. *Freestone*. NOBLESSE (Fig. 2).

Albatross  
Dymond  
Early Anne  
Early Savoy  
Early Victoria  
Early York  
Gladstone  
Hemskerk  
Malta  
Montauban  
Noblesse  
Princesse Marie

Pucelle de Malines  
Raymaekers  
Red Magdalene  
Sea Eagle  
Sulhamstead  
Vanguard  
White Magdalene  
White Nutmeg.

#### B. *Clingstone*. NEWINGTONS (Fig. 3).

Early Newington  
Old Newington  
Pavie Bonneuil.

##### Leaves with round glands (Fig. 4).

#### A. *Freestone*. MIGNONNE.

A. Bec  
Acton Scott  
Alexander (semi-clingstone)  
Alexandra  
Barrington  
Belle Bance  
Early Admirable  
Early Alfred  
Early Grosse Mignonne  
Grosse Mignonne  
Hale's Early

Large Early Mignonne  
Leopold the First  
Mignonne Dubarle  
Mountaineer  
Princess of Wales  
Rivers' Early York  
Royal Ascut  
Springrove.

#### B. *Clingstone*.

None.

##### Leaves with kidney-shaped glands (Fig. 5).

#### A. *Freestone*. PURPLES.

Amsden (semi-clingstone)  
Belle Imperiale  
Dr. Hogg  
Early Beatrice  
Early Rivers  
Early Purple  
Early Silver  
Flat China  
Honey  
Lord Palmerston

Nectarine Peach  
Prince Eugène  
Red Nutmeg  
Sanguinole  
Shanghai  
Waterloo (semi-clingstone)  
Yellow Admirable.

#### B. *Clingstone*. POMPONE.

Pavie de Pomponne.

#### II.—FLOWERS SMALL (Fig. 1, C).

##### Leaves without glands.

#### A. *Freestone*. GEORGES.

Early Tillotson  
Royal Charlotte  
Royal George

Stirling Castle.

#### B. *Clingstone*.

None.

##### Leaves with round glands.

#### A. *Freestone*. GALANDES.

American Newington  
Belle de Doné  
Bellegard  
Boudia  
Canary  
Coolidge's Favourite  
Crawford's Early  
Crimson Galande  
Dagmar  
Desse Tardive  
Early Albert  
Exquisite  
George the Fourth  
Golden Rathripe  
Gregory's Late

Incomparable en Beauté  
Late Admirable  
Morrisania  
Nivette  
Osprey  
Stump-the-World  
Téton de Venus  
Van Zandt's Superb  
Violette Hative  
Walburton Admirable  
Washington Rathripe  
Yellow Alberge.

#### B. *Clingstone*.

None.

##### Leaves with kidney-shaped glands.

#### A. *Freestone*. CHANCELLORS.

Belle Chevreuse  
Be le de la Croix  
Cancellor  
Comet  
Early Louise  
Golden Eagle  
Lady Palmerston  
Magdala  
Prince of Wales

Reine des Vergers  
Rosanna  
Salwey  
Sieulle  
Small Mignonne.

#### P. *Clingstone*. CATHERINES.

Catherine  
Incomparable.

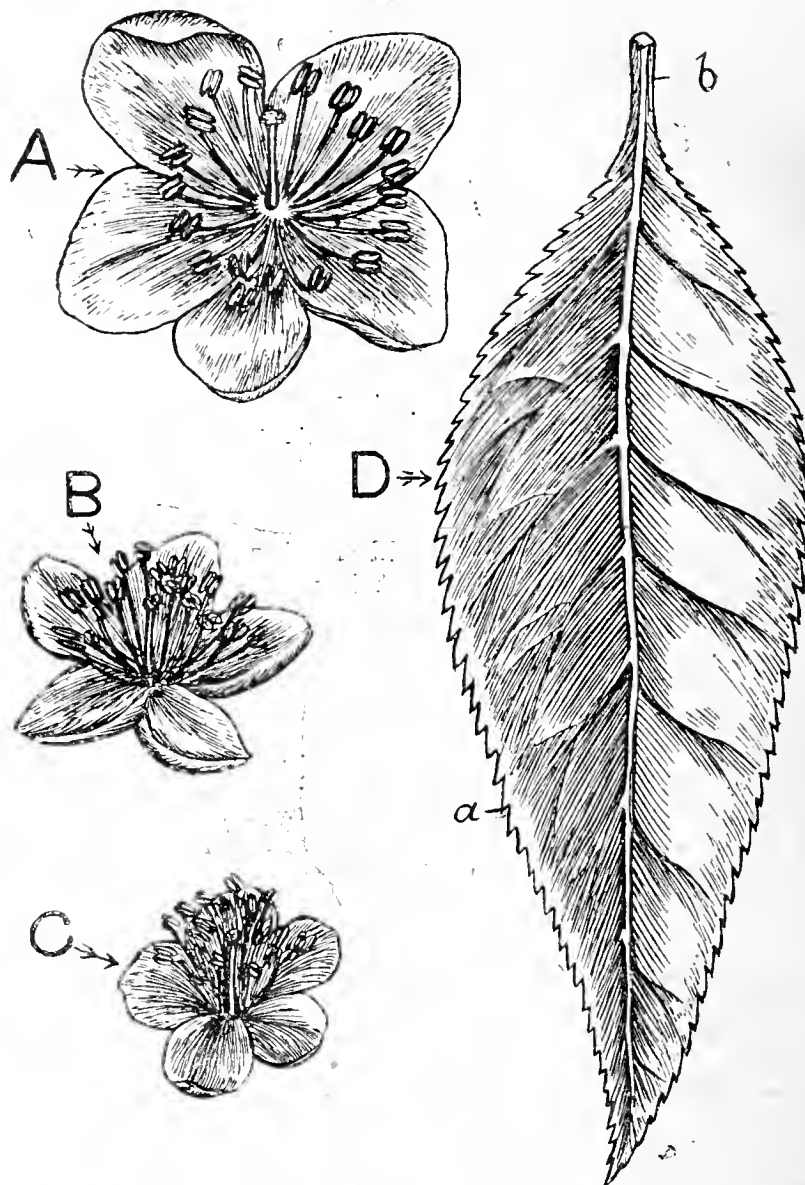


Fig. 1.—Flowers of Peaches—Leaf without Glands

A, Large Flower—Grosse Mignonne Peach.  
B, Intermediate Flower, neither large nor small—Alexander Peach.  
C, Small Flower—Royal George Peach.  
D, Leaf of Peach without glands; a, serrated edge; b, glandless petiole.

### NECTARINES.—I.—FLOWERS LARGE.—Leaves without glands.

#### A. *Freestone*. HARDWICKS.

Advance  
Bowden  
Hardwicke

Hunt's Large Tawny.

#### B. *Clingstone*. NEWINGTONS.

Early Newington  
Old Newington.

##### Leaves with round glands.

#### A. *Freestone*. PITMASTONS.

Humboldt  
Pitmaston Orange  
Pineapple.

Spencer.

#### B. *Clingstone*

None.

##### Leaves with kidney-shaped glands.

#### A. *Freestone*. STANWICKS.

Albert  
Byron  
Darwin  
Fairchild's Early  
Lord Napier  
Rivers' Elruge

Rivers' Grange  
Rivers' White  
Stanwick  
White.

#### B. *Clingstone*. ROMANS.

Roman.

### II.—FLOWERS SMALL.—Leaves without glands.

#### A. *Freestone*. TAWNYS.

Hunt's Tawny.

#### B. *Clingstone*.

None.

##### Leaves with round glands.

#### A. *Freestone*. BOSTONS.

Albert Victor  
Boston  
Prince of Wales

Stanwick Elrage.

#### B. *Clingstone*.

None.

##### Leaves with kidney-shaped glands.

#### A. *Freestone*. VIOLETTES.

Balgowan  
Dante  
Downton  
Due du Telliers  
Elruge  
Impératrice  
Late Melting  
Murey

Newton  
Peterborough  
Victoria  
Violette Grosse  
Violette Hative.

#### B. *Clingstone*. GOLDENS.

Golden.

(To be continued.)

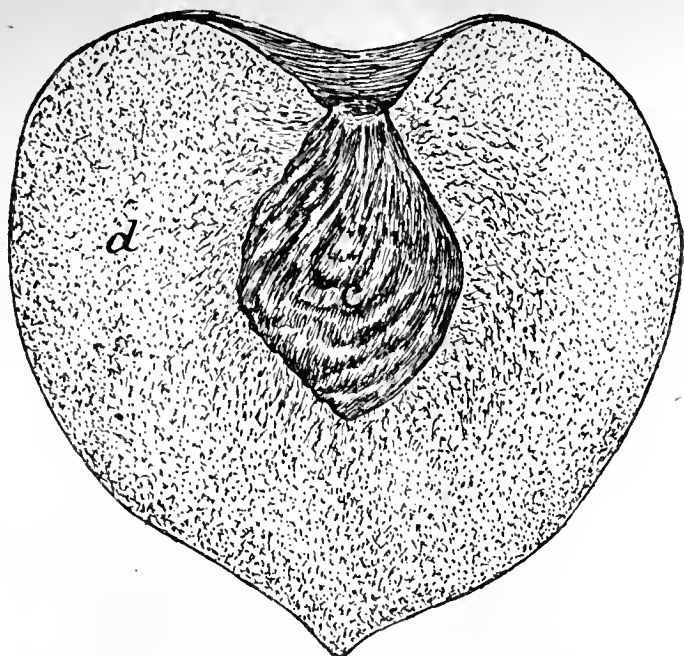


Fig. 2.—Section of Freestone Peach.

c, stone; d, flesh.

## Societies.

### Royal Horticultural—Drill Hall, Sept. 23rd.

A more interesting or a fuller meeting than that of Tuesday last has not been recorded for a long while. Messrs. J. Veitch and Sons, Limited, filled one side of the hall with a collection of lesser known Japanese shrubs, with dried specimens and photographs of the growing trees to illustrate the lecture on these lesser known shrubs, given by Mr. James Veitch at three o'clock. It may be remembered that Mr. Veitch travelled in the East, and also Australia, &c., some twenty odd years ago. Roses, Dahlias, and early Chrysanthemums, with Gladioli, Orchids, and Ferns composed a bright and varied meeting. The fruit from Mrs. Nix was also seasonable. A committee of the National Dahlia Society met at a quarter to one, and recommended a number of awards to Dahlia novelties, apart from the certificates given by the Floral Committee of the Royal Horticultural Society.

#### Fruit and Vegetable Committee.

Present: Geo. Bunyard, Esq. (in the chair); with Messrs. H. Esling, J. Bates, S. Mortimer, A. Dean, G. Kelf, W. Pope, E. Beckett, G. Reynolds, G. Norman, G. Wythes, W. Poupert, O. Thomas, and Jos. Cheal.

A magnificent collection of fruit came from Mrs. Nix (gardener, Mr. E. Neal), Tilgate House, Crawley, Sussex, about which estate we had some notes in the Journal on September 4th last. The space of tabling occupied was 25ft by 3½ft, and the display was indeed "a highly creditable one," to use the words of the Chairman of the Fruit Committee. Amongst the dishes shown were superb Nectarine Peaches, a handsome dish of Princess of Wales variety, and also Walburton Admirable. Of Plums we noted the newer Reine Claude de Bavay, a greenish Gage, and Prince Englebert. The ordinary Transparent and the Golden were on view, and other Plums as well. Among Apples there were large samples of Mère de Ménage, Lane's Prince Albert,

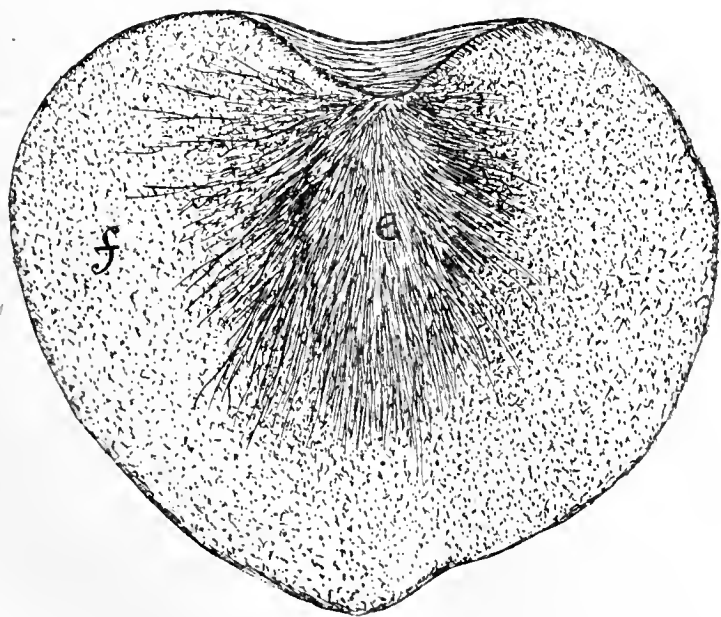


Fig. 3.—Section of Clingstone Peach.

e, stone to which flesh adheres by stringy matter; f, flesh.

The Queen, Peasgood's, Royal Jubilee, and of brightly coloured samples there were Duchess' Favourite, Manks Codlin, Cellini Pippin, Worcester Pearmain, and Hereford Beefing. Pears and Melons were included. Grapes Appley Towers, Lady Downe's, and Black Alicante were finely finished and large in bunch and berry, each finely thinned. A Silver Knightian Medal was awarded.

Lord Llangattock (gardener, Mr. Coomber), The Hendre, Monmouth, sent two Queen Pines of immense size, weight, and finish, and so superior that a Silver Knightian Medal was awarded.

#### Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair); with Messrs. J. O'Brien, H. M. Pollett, H. Ballantine, R. Broom-White, Jas. Douglas, E. Hill, W. Cobb, J. Charlesworth, J. Cypher, G. F. Moore, F. G. Thorne, J. W. Odell, W. Boxall, W. H. Young, H. A. Traey, and F. W. Ashton.

A large number of small exhibits were shown by the usual contributors. Messrs. Hugh Low and Co. had some beautiful hybrids, including the charming L. c. x Mrs. J. W. Whiteley, a lovely mauve, with a striking purple lip; also Cattleya x mollis (C. Gaskelliana x superba), of beautiful delicate form, pale mauve



Fig. 4.

Leaf of Peach with Round Glands.

g, crenate edge; h, glands.

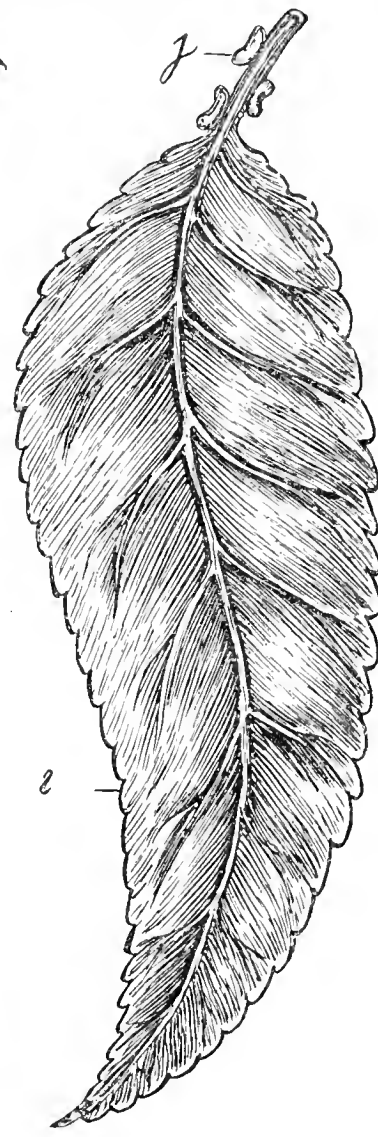


Fig. 5.

Leaf of Peach with Reniform or Kidney-shaped Glands.

i, indented edge; j, glands.

in colour, with a purple lip. Their C. Martini nobilior is a showy thing, deep ruddy purple, with a handsome violet-purple lip.

Messrs. Veitch contributed L. c. x Bella Langleyensis, a large and noble flower; L. c. x Ophir, L. c. x Bletchylensis var. Lælia Pacuria, with tea-coloured sepals and petals.

Messrs. Charlesworth and Co., Sander and Sons, Sir F. Wigan, Bart., Jeremiah Colman, Esq., H. T. Pitt, Esq., F. W. Wellesley, Esq., and others also brought up specimen plants. Messrs. Stanley, Ashton and Co., Southgate, exhibited one of the most beautiful groups of Cattleya aurea it has been our good fortune to see.

#### Floral Committee.

Present: W. Marshall, Esq. (in the chair); with Messrs. H. B. May, R. Dean, Chas. T. Druery, Edwin Molyneux, G. Renthe, Wm. Howe, Chas. Dixon, Geo. Gordon, Chas. E. Pearson, H. J. Cutbush, J. W. Barr, W. P. Thomson, J. Fraser, H. J. Jones, E. H. Jenkins, Wm. J. James, J. H. Fitt, Geo. Paul, E. Molyneux, E. Mawley, and Jas. Hudson.

We can hardly do justice to the many choice collections



brought forward on this occasion. Roses were exquisitely shown from Messrs. Wm. Paul and Son, The Nurseries, Waltham Cross, Herts. They had a hundred sorts, many of them in great armfuls. Two of these were certificated, namely, *Sulphurea* and *Madame Antoine*. Besides these we may name *Corallina*, *White Lady*, *Enchantress*, *Salmonea*, *Princesse de Sagan*, *Goldquelle*, *Madame Ravary*, and *Chamdeleon*. A fuller note of these may be useful in a succeeding issue.

From L. de Rothschild, Esq. (gardener, Mr. J. Hudson), came another beautiful collection, shown in a new fashion, in vases on a flat open table, and having long shoots scrambling through and among them. Messrs. Paul and Son, of Cheshunt, contributed hardy flowers and Roses; Cutbush and Son had Carnations and hardy border flowers; Hobbies, Limited, sent Dahlias; and other collections of this flower of the moment came from Messrs. Cheal and Sons, J. T. West, Stredwick, Keynes, Williams and Co., and Chas. Turner. From Braiswick Roses were sent, while hybrid *Lobelias* (crosses with *L. syphilitica* and *cardinalis*) were staged by Messrs. Ladhams, of Southampton. These they promised to let us have some notes of, so that more need not be said now.

Mr. Leonard Ching, of The Crescent Nurseries, Edmonton, put up a very creditably grown group of exotic Ferns. In the group were fine plants of the Bird's Nest Fern, also *Gymnogramma chrysophylla grandiceps superba*, *Adiantum speciosum*, and *Lomaria ciliata princeps*.

Messrs. Bull and Sons, of King's Road, Chelsea, were forward again with an exhibit of choice and rare stove foliage plants. Amongst these were typical plants of *Dracæna Victoria*, *Begonia President de Boureuilles*, *Nephtytis picturata*, and *Tradescantia regina*. A F.C.C. was given to *Polypodium conjugatum* from the same source.

Messrs. Veitch, as we mention in the opening lines, contributed fifty or more cut branches of shrubs, representing lesser known kinds of ornamental value, and which have been proved to be hardy in this country. These shrubs were not mere twigs set in vases, but whole limbs and sections, some of them 12ft high, and in the case of some of the climbing plants, they were 20ft in length, attached to poles. Specimens were shown in a mounted state; on papers in front, and between them, and the actual live branches at the back, were large photographs of the trees as growing in the Veitchian shrub nurseries at Coombe Wood. We may name a few of the most striking, which were: *Cornus brachypoda variegata*, a very fine white and green leaved novelty; *Cæsalpina japonica*, a free grower and handsome flowerer; *Polygonum multiflorum*, a beautiful climber; *Clerodendron trichotomum*, becoming well-known, it has large Catalpa-like leaves; *Quercus dentata*, a huge leaved species, which colours well; *Q. serrata* and *Q. acuta*, both invaluable evergreen species with fair-sized glossy, serrated foliage; *Enkianthus campanulatus*, with white, pendant bell-shaped flowers, very lovely; *Styrax Obasia*, already popular. It is a robust shrub, making 3ft of growth in a season. It throws blooms profusely every alternate year. There were also *Betula Maximowiczii*, with broader leaves than any other kind in commerce; *Magnolia Watsoni*; *Stuartia pseudo-Camellia*, with flowers resembling a single white *Camellia*; *Meliosma myriantha*, with long leaves and fine twiggy growth; and lastly, *Acer Miyabei*, named after a Japanese botanist, a very graceful lawn shrub.

Messrs. Wells and Co. sent *Chrysanthemums*, as did Mr. R. Foster, of Nunhead Cemetery, S.E. Mr. Baxter, of Woking, had Dahlias, and Mr. George Prince had Roses. *Populus ontariensis*, mentioned on page 204 of this Journal, is a handsome new variety with huge yellow variegated leaves. Specimens were sent by Mr. J. Carter, Willow Bank Nurseries, Keighley, Yorks. Messrs. Burrell, of Cambridge, contributed a beautiful display of *Gladioli*, in which we noted a large number of unnamed, superior seedlings. Mr. William Pfitzer, Stuttgart, Germany, sent *Montbretia Germania*, a large belled crimson, and *Gladioli*.

#### Medals.

**FLORAL COMMITTEE.**—Gold for group of *Gladioli* to Messrs. Burrell and Co., Cambridge. Silver-gilt Flora for Roses to Messrs. G. Prince, Kingston. Silver-gilt Banksian for Dahlias and shrubs to Messrs. Cheal, Crawley; for garden Roses to Messrs. F. Cant and Co., Colchester. Silver Flora for cut *Begonias* to Messrs. Blackmore and Langdon, Bath; for autumn Roses to Messrs. Paul, Waltham Cross; for Dahlias to Messrs. J. Green and Co., Dereham; for garden Roses to L. de Rothschild, Esq., Acton. Silver Banksian for Ferns to Mr. Leonard Ching, Enfield; for herbaceous plants to Messrs. Paul and Son, Cheshunt; for *Chrysanthemums* to Messrs. Wells and Co., Redhill; for *Chrysanthemums* to Mr. R. Foster, Nunhead. Bronze Banksian for Dahlias to Messrs. West, Brentford.

**ORCHID COMMITTEE.**—Silver Flora for group of hybrid Orchids to Messrs. Jas. Veitch and Sons, Chelsea; for group of Orchids to Messrs. Hugh Low and Co., Enfield; for group of Orchids to Hon. W. Rothschild, M.P., Tring Park, Surrey. Silver Banksian for group of Orchids to Messrs. Stanley, Ashton and Co., Southgate; for group of Orchids to Jeremiah Colman, Esq., Gatton Park, Surrey.

#### Certificates and Awards of Merit.

The following Cactus Dahlias were certificated:—

*Etna*.—Pale purplish-mauve, beautifully fluted and twisted petals; good size. (Award of Merit, R.H.S.) Stredwick.

*Eva*.—A lovely white, of good form, strong in build. (Award of Merit from R.H.S.) Stredwick.

*Coronation*.—The most brilliant scarlet crimson there is. Flowers neat and small. (F.C.C. from N.D.S.) Keynes, Williams, and Co.

*F. H. Chapman*.—One of the finest; petals incurving, orange-red; good centre; large. (Award of Merit, R.H.S., and F.C.C. from N.D.S.) Stredwick.

*H. F. Robertson*.—A brilliant canary yellow, rather slack in build. (F.C.C. from N.D.S.) Stredwick.

*H. J. Jones*.—Clear yellow, with pink. (Award of Merit, R.H.S.) Stredwick.

*Lucifer* (P. W. Tullock, Esq.).—One of the largest and finest Cactus Dahlias of the year, orange-red. (Award of Merit from the R.H.S.)

*Mabel Tulloch*.—A sweet rose-pink with yellowish centre. Flowers moderate in size, incurving, and neat. (F.C.C. from N.D.S., and Award of Merit, R.H.S.) Stredwick.

*Minnie West* (J. T. West).—Not found.

*Miss T. Cherry*.—A.M., R.H.S.

*Raymond Parks*.—Bright scarlet-crimson; good size and fair form of petal. (Award of Merit, R.H.S.) Stredwick.

*Tesuvius*.—A yellow ground Fancy Cactus, striped bright crimson. (Award of Merit, R.H.S.) Stredwick.

*W. F. Balding*.—A richly-coloured bloom, deep yellow, with ruddy basal petals; large, the petals inclined to broaden. (Award of Merit, R.H.S.) Stredwick.

*Winson*.—A.M., R.H.S.

Two single Dahlias:—

*Dahlia Serita* (Cheal and Sons).—A rich amaranth single, with lighter tips. (Award of Merit from R.H.S., and F.C.C. from N.D.S.)

*Dahlia Snodrop* (Cheal and Sons).—A pure white single with a showy orange disc. (Award of Merit, R.H.S.)

Also the two following Show varieties:—

*Show Dahlia A. M. Burnie*.—A good flower of a cinnamon shade. (Award of Merit, R.H.S.) Mrs. St. Pierre Harris, Orpington.

*Show Dahlia Mr. W. Treseder*.—A handsome Show bloom, already described. (Award of Merit, R.H.S.)

*Cattleya Grossi*.—Of the Acklandi type. The lip is bright purple, the sepals and petals dark brown. (Award of Merit.) Hugh Low and Co.

*Cattleya* × *Iris*.—The parentage is *C. bicolor* and *C. aurea*. A remarkable flower, large and bold. The lip bends downwards and expands broadly in front, being coloured bright amaranth. The wavy petals are ruddy brown, and the narrower strap shaped sepals are the same colour. (F.C.C.) Charlesworth & Co.

*Gaillardia ceculata Sulphur Gem* (B. Ladhams).—A pretty soft buff yellow with dark disc. (Award of Merit.)

*Liatris graminifolia*, var. *dubia* (Wallace & Co.).—Grows 6ft to 7ft high, and proportionately large and showy. Broad spikes of bright, purplish mauve flowers. (Award of Merit.)

*Lilium Browni*, var. *chloraster* (J. Veitch & Sons, Ltd.).—This variety is not so long in the tube as the type, nor fragrant. It is almost white with a yellowish throat. A stately late-flowering Lily and quite hardy. Grows 4ft.

*Lobelia* × *Andrew Barlow* (B. Ladhams).—A rich deep reddish-purple. (Award of Merit.)

*Lobelia* × *Purple King* (B. Ladhams).—A hybrid between *L. syphilitica* and *L. cardinalis*. It is hardy and robust. The flowers are violet purple. (Award of Merit.)

*Miltonia Regnelli*, *Gatton Park variety* (J. Colman, Esq.).—The firm little flowers are very showy, with deep buff segments and purplish lip. The leafage is very much like that of an *Oncidium*. (Award of Merit.) Jeremiah Colman, Esq., Gatton Park, Surrey.

*Polypodium conjugatum* (Bull & Sons).—This certainly is one of the most distinctive species that have appeared for a long while. The fronds are 5ft to 6ft long, bright decided green, with long, slender pinnules divided right to the black midrib. An elegant and invaluable novelty. (First-class Certificate.)

*Rose, sulphurea* (William Paul & Son).—A beautiful sulphur yellow decorative bedding Rose, a free bloomer and good autumnal, with glossy dark leaves and crimson shoots, not liable to mildew, and a good doer. (Award of Merit.)

*Rose, Madame Antoine Man* (William Paul & Son).—Strong and handsome in the bud, a beautifully rounded, full flower. The centre is creamy, the lower or guard petals being rosy-lilac. Very strong; a promising new variety. (Award of Merit.)

#### Royal Caledonian Horticultural.

On Thursday, September 11, we were enabled to give a brief telegraphic summary of this fine exhibition, held in the Waverley Market, Edinburgh. We have now the pleasure to refer more in detail to some of its leading features. The exhibition, as formerly stated, was highly successful, inasmuch as the great area of the hall was filled with exhibits that, on the whole, were

of very high quality, notwithstanding the many difficulties with wind and weather that Scottish gardeners have this season had to contend with. Seldom, perhaps, has the proverb been more amply justified that Scottish weather consists of "nine months of winter and three months of damned bad summer," than in the present year, yet that perseverance which overcomes so many difficulties did not materially detract from the quality or attractiveness of the autumn show.

The fruit and Grape classes are always a very prominent feature at Edinburgh, and gardeners gather from all parts of the country to see the high-water mark of attainable perfection. The centre of attraction was undoubtedly the dessert table, 10ft by 4½ft, for not more than sixteen dishes chosen from a collection laid down in the prize list, and decorated with plants or flowers at the discretion of the competitor (Orchids excluded). There were in all four very meritorious tables shown, and as the fruit and floral portions had to be treated as separate prizes, the judges had a difficult task set them. After long and careful scrutiny, Mr. Dawes received the coveted first award for the fruit portion by only half a point in advance of his Scottish rival, Mr. Kidd, of Carberry Tower, the respective points being: for Mr. Dawes, 93½ points out of a possible 121, and 93 for Mr. Kidd out of a possible 112. Curiously enough, this showed the second-prize man to have gained 84 per cent. of his points, against 77 per cent. for his successful rival. Many onlookers thought that, with such a very close contest, an equal first would have best met the case. Mr. Dawes was strongest with Peaches, Nectarines, Melons, Figs, &c., while his Grapes, though fine, were not quite up to those of Mr. Kidd. Mr. Cairns, of Balruddery, was a very good third, and the unplaced table of Mr. Smith, Oxenford Castle, was also very meritorious.

In the decorative division of the prize, Mr. Kidd left no doubt, his exhibit being in this respect much the finer, gaining 24 out of the 28 points, though, in our opinion, the decorating in this and some of the other tables was overdone. Mr. Kidd's centre épergne was beautifully and lightly done with *Gloriosa superba*, Sunrise Tea Roses, Lily of the Valley, Francoa, &c. Mr. Smith, of Oxenford, was awarded second for decoration, while Mr. Dawes had to be content with third place, the flowers being of a commoner description and the effect slightly heavy.

In the competition for ten dishes of fruit, Mr. Dawes and Mr. D. Murray, Culzean Castle (who, by the way, was appearing for the first time, carrying his newly awarded honours as Neil medallist with characteristic modesty), had a very hard tussle, but the premier position was finally awarded to Mr. Dawes. Mr. Smith, Oxenford, was a good third. Mr. Dawes' Grapes in this competition outweighed, in the eyes of the judges, the very handsome Smooth Cayenne Pine in Mr. Murray's collection.

For collections of hardy fruit grown in Scotland, Mr. Day, Galloway House, was an easy first, his Pears, Plums, and Apples being very fine. Mr. Binnie, North Berwick, and Mr. Harper, Bankfoot, Perth, were second and third respectively with good assortments.

For the twelve dishes of orchard house fruit (Grapes excluded) there were five entries, the victor being Mr. James Beisant, Castle Huntly, with very handsome dishes of Pears *Béurre Diel* and *Doyenné du Comice*, wonderful Peasgood's Nonesuch and Alexandra Apples, and good Nectarines, Peaches, and Plums. Mr. Dawes had to be content with second place, but showed excellent material.

The Grape classes were, indeed, a great feature of the show, and, though Edinburgh people have sometimes seen, perhaps, a fully larger display, they have seldom, if ever, seen a better. The chief class for six bunches was very keenly contested, and it was gratifying that finish and quality carried the day. Mr. Lunt, Keir Gardens, maintained his well-earned reputation as one of the very foremost Grape culturists of the day, with splendidly grown and beautifully finished bunches of Muscat of Alexandria, Black Hamburgh, and Madresfield Court. Messrs. Buchanan, Kippen, in this competition had to give place to Mr. Lunt, but their exhibit was well worthy of their reputation as champion market growers. They staged Muscats, Alicantes, and Black Hamburgh. In the class for four bunches, Messrs. Buchanan were first amongst the eight competitors, with beautiful samples of Alicante, Cooper's Black, Alnwick Seedling, and Diamond Jubilee. Mr. Day, Galloway House, followed very closely with Muscat of Alexandria, Mrs. Pince, Muscat Hamburgh, and Mrs. Pearson. Many would not have been surprised if the premier ticket had been on Mr. Day's stand. Mr. Beisant was an excellent third.

For two bunches of Muscat of Alexandria Mr. Day was awarded first, but followed very closely by Mr. Kidd, whose Muscats are always well to the front, showing that, as a high-class Grape culturist, he is no "kid." Mr. Green, Grinkle Park, Yorks, was third with large but rather poorly coloured bunches. For one bunch Muscats, Mr. Wann, gardener to Lord Balfour, the popular Scottish Secretary, was first with a very pretty bunch, with Mr. Green and Mr. Cairns second and third.

The Council of the Royal Caledonian give special encouragement for the cultivation of Black Hamburghs, and on this occasion their efforts were well rewarded, there being sixteen com-

petitors for two bunches, and twenty for a single bunch. In both classes, Mr. Lunt proved victorious with large, well finished, and beautifully coloured bunches. Mr. Fairholm, Alloa, being second in both classes—a highly creditable feat. Messrs. Buchanan were first for Alicantes, as also for Alnwick Seedling, Mr. Day and Mr. Leslie, Piteullen, being second in the respective classes. Mr. Leslie, who is well known as a high-class cultivator, was on this occasion not so much in evidence as usual. Mr. David Murray was first for Lady Downe's, and Mr. Glen carried the premier prize for Madresfield Court, leaving Mr. Lunt in second position. For a new Grape, Messrs. Buchanan were first with Diamond Jubilee, and Mr. Lunt second with Prince of Wales, labelled a "Sport from Mrs. Pince." In the "Any other Class," Mr. Nicol, Forgandenny, was first with a beautiful bunch of Gros Maroc; second, Mr. Waldie, of Dollar. For one bunch any other white, Mr. Mathieson, North Berwick, gained the first award with a most attractive bunch of Buckland Sweetwater. For the finest flavoured black, Mr. Lunt was first with Muscat Hamburgh; Mr. Beisant second with Black Hamburgh. Finest flavoured white: Mr. Galloway was first with a small bunch of Muscat of Alexandria. For the finest bloomed bunch of Grapes, Mr. Sutherland, Polmont, was first with Cooper's Black.

Passing from Grapes to hardy fruits, the various classes showed that, while there were many good samples, the season had been against growers, size and colour being conspicuously absent, and some growers could not exhibit at all. For twelve varieties of Pears, Mr. Findlay, Uckfield, Sussex, was first with creditable specimens of popular sorts, Mr. Gibson, Marlow, second, and Mr. Dawes third. For six varieties, grown in Scotland, Mr. Galloway, gardener to the Earl of Wemyss, at Gosford, was first, Mr. Greenlaw, Kilmun, second, and Mr. D. Murray third. A great number of single dishes were shown in competition for twenty separate classes, but our space is too limited, and life is too short, to enter into details.

There were also a great array of dishes of Apples, of which the same may be said, there being no fewer than fifty classes of Apples. Surely many of these classes could be profitably omitted, anything of special value being sure to come to the front in the collections of dessert and cooking varieties. For twelve varieties (open), Mr. Whiting, Hereford, was first, Mr. Tolhurst, Polmore, Sussex, second, and Mr. Koe, Hereford, third. For eight varieties grown in Scotland, Mr. Day was first, Mr. D. Murray second, and Mr. Nicol, Forgandenny, third. For six varieties, Mr. Dawes was first and Mr. MacKinlay second.

A very fair display for the season was made in the classes for Strawberries, Raspberries, Gooseberries, Currants, &c.: the dish of Fay's Prolific Red Currant from Mr. Smith, Oxenford, was specially good. Superlative Raspberries from Mr. Hunter, Galashiels, were also noteworthy.

For Melons, Mr. Hughes, Peebles, and Mr. M. Hendry, Balerno, were first respectively for green and scarlet fleshed varieties. Peaches were a very fine lot, Mr. Glen, Larbert, being first with beautiful Sea Eagle, Mr. Brown, Dunnikier, second with Barrington, and Mr. Dawes third. Mr. Dawes gained first for Nectarines, Mr. Lunt second. For Gages, Mr. Dawes was first and Mr. Cairns second. Twelve purple Plums (not Gages): Mr. Findlay was first and Mr. Dawes second. Twelve red Plums: Mr. Findlay was also first, and Mr. R. G. Sinclair second. Collection of dessert Plums: Mr. MacKinlay first, Mr. Harvey second, and Mr. Dawes third. Collection of culinary Plums: Mr. Gibson first, Mr. Harvey second, and Mr. MacKinlay third.

**Plants.**—For groups of plants there were only two competitors, and these not of outstanding merit. In this department the veteran Mr. M. MacIntyre, The Glen, Innerleithen, was not at this show, he having gone for a long holiday to the Fiji Islands. His plants were missed. The two groups were not of outstanding merit, but that of Mr. Knight, Lenzie, was a long way the best. In a neat, loose arrangement were very well grown highly coloured Crotons and attractive *Dracenas*, *Liliums*, *Gloxinias*, *Orchids*, &c., with a few graceful Palms. Mr. Geo. Wood, Oswald House, was second, but on this occasion was not up to his usual mark, and flatness and want of brightness being much noticeable in the group.

Plant growing does not seem to advance in the immediate neighbourhood of Edinburgh, as we observed most of the notable plants staged were from a distance. For four stove or greenhouse plants in bloom, Mr. Thorn, Balerno, was first with fair plants of *Lapageria alba*, *Vallota purpurea*, a *Pancratium fragrans*, and a double *Petunia*. Mr. Wood was second. For one flowering plant, Mr. G. McKenna was first, with a handsome *Statice*. For four Orchids, Mr. Sharp, Freeland, Perth, was well first with two *Odontoglossums*, a *Vanda tricolor*, and *Cattleya velutina*; second, Mr. Wood. Mr. Sharp was alone for three *Cypripediums* and for one Orchid.

Ferns were well shown, Mr. Lunt being first for four *Adiantums* with large handsome specimens of *concinnum*, *cuneatum*, *digitatum*, and *grandiceps*. Mr. R. Stewart, Murrayfield, a good second. For four exotic Ferns, Mr. Stewart was first with very handsome plants, which attracted much attention. British Ferns were well shown, Mr. J. C. Brown's first prize nine being



most attractive. Fuchsias made also a good display. For foliage plants, Mr. Lunt was a long way ahead. His six specimens were splendid first-rate examples of good cultivation, prominent among them being Anthurium Veitchi, Dracæna Doucetti, and Croton Houldsworthi. Mr. McKenna was first with two fine Dracænas—Doucetti and Lindeni, and for two Crotons. Mr. Lunt was first with two splendidly coloured bushes in tubs. Mr. Wood scored for specimen Palms. Mr. Knight was at the front for table foliage plants, and Mr. Lunt for table Ferns.

*Cut Flowers.*—These were wonderfully shown for the season, especially after the storm of the 3rd. Dahlias were well shown in the gardeners' classes, Mr. Thos. Robertson gaining the first prizes for twelve Show and Fancy varieties, and also for twelve Cactus varieties. For six Show Dahlias Mr. Sutherland was first, and for six Cactus varieties the Rev. H. G. Smith, Duns, led. The principal show of Dahlias, however, was from trade growers, and in the nurserymen's competition Messrs. Campbell and Son, of Blantyre, were first for a collection occupying 7ft by 5ft, with a very fine lot, also for eighteen bunches of Cactus Dahlias and for twenty-four Show and Fancy Dahlias. Mr. Gold, Wishaw, and Mr. Sutherland, Lenzie, also showed Dahlias well. Gladioli were not numerous, but they were good. The thirty-six staged by Mr. Muir, Prestwick, were a marvellously fine lot, while those in the gardeners' and amateurs' classes were of first-rate quality, Mr. Bennett, Tweedmouth, and Mr. Lawrie, Prestwick, gaining first and second prizes respectively.

Sweet Peas were an extensive and beautiful exhibit, some of them very fine, but some weather stained. For twelve vases, Mr. A. Shakelton, York, was first, and also for six vases; Mr. Duncan, Duns, being second for twelve, and Mr. Malcolm, Duns, for six. Mr. Shakelton was also first for twelve vases decorated with any foliage or grasses. For six vases of Carnations, Mr. D. Oliver, Hawick, was first, and Miss Duncombe, Newton, York, second.

Hardy herbaceous perennials were well shown, the first prizes for both twelve and six going to Mr. A. Bryden, Innerleithen, with beautiful, well arranged lots, conspicuous among them being fine specimens of *Eucomis regia*, *Sidalcea Listeri*, and *Francoa appendiculata*. Annuals were well shown, but arranged in close, dumpy bouquets, have not the appearance they ought to have. The secretary worthily tried to introduce a better state of things by exhibiting six loosely arranged vases, but the judges need educating, and awarded the prizes to the tight bunches, which show no natural habit or beauty of the flowers. Mr. A. Dickson was first for twelve varieties. Pansies, Phloxes, Asters, &c., were well shown. Chrysanthemums were a good show, both in blooms and bunches. The twelve blooms from Mr. Baird, Cambus, were splendid flowers, but were too reminiscent of winter to be really appreciated.

*Roses.*—The leading feature in cut flowers was the Roses, a better September exhibition of the queen of flowers having probably never been seen before. In the nurserymen's section the competition was very keen, and exhibits of great merit. The main awards have already been reported. For twelve scarlet or crimson Roses, Messrs. Dickson and Sons were first with Charles Lefebvre, Messrs. Croll second. Twelve pink Roses, Messrs. Croll first with Mrs. John Laing, Mr. Hugh Dickson second with the same variety. Twelve any white Rose, Messrs. Croll first with Bessie Brown. Best collection of Roses on a table 5ft by 5ft, Messrs. Cocker, Aberdeen, were easily first with a highly meritorious collection, beautifully arranged; Messrs. Croll were second with fine blooms, more formally set up. For twelve vases Roses (H.P.'s excluded), Messrs. Ferguson, Dunfermline, were first with very fine blooms well set up. Mrs. J. W. Grant was very prominent, and Madame Ravary, a deep orange yellow, of recent introduction, is very promising.

In the Roses classes for gardeners and amateurs there was a good, but not a large, display. For twelve blooms, Mr. L. Black, Carenden, was first, and the veteran rosarian, Mr. Parlane, Helensburgh, second. For twelve Tea Roses Mr. Parlane was first, and Mr. Bennett, Helensburgh, second. Roses in vases were well shown, all the first prizes being gained by Mr. A. E. Todd, Musselburgh, for vases of good blooms, most artistically placed on view. His vase of Caroline Testout was most beautiful. These were an object lesson to all other exhibitors, both trade and private, as to how to arrange Roses in vases for effect.

*Vegetables* were a large show, though some were not quite up to the usual mark through the coldness of the season. The collections were referred to in our issue of September 11. In the single dishes there were excellent exhibits of Tomatoes, Cauliflower, Leeks, Onions, Potatoes, Cucumbers, Carrots, &c., but space forbids us to particularise.

Reference may be made to Messrs. Sutton and Sons' exhibit, which was very massive and showy, if a trifle stiff and somewhat crowded, but it was an embarrassment of riches. Their specimens of their vegetable specialities were specially worthy of note. Their strains of fringed Begonias, six months from seed, were very beautiful. Celosias were also fine. Their noted strains of Asters were not in such good bloom as last year, but showed high quality.

The group of fruit trees in pots from Messrs. Rivers, of Saw-

bridgeworth, was the most educative feature of the exhibition. It is the first time that gardeners in the north have had brought before them in this way the successful manner in which fruit trees can be grown and fruited in comparatively small pots, and the Gold Medal bestowed on the collection was a worthy compliment to the southern firm for the public spirit shown in coming so far from their base of operations.

Messrs. Laing and Mather's Carnations were a very notable exhibit for variety and quality, but specially for the tasteful manner in which they were arranged. All stiffness was abandoned, and the handsome glasses were most elegantly filled. The genial head of this enterprising firm, Mr. Mather, is to be complimented on the success of this decorative experiment. Some of the firm's novelties were prominent, such as Duchess of Roxburghe, Sir Waldie Griffith, &c. A first-class certificate was awarded to a new yellow Carnation, Lady Nora Fitzherbert, of very dwarf and proliferous habit. This should be a good bedder.



*Tulipa retroflexa.*

The hardy border flowers exhibited by Messrs. Cocker and Sons, Aberdeen, were a whole show in themselves—a large stage, 40ft in length, filled with most beautiful hardy flowers of all the choicest sorts, *Liliums*, *Gaillardias*, *Montbretias*, *Pyrethrums*, *Eryngiums*, *Chrysanthemum maximum* varieties, &c. They received a certificate for a beautiful deep-rose Carnation.

Messrs. Dobbie and Co., of Rothesay, had also a very beautiful table, largely of Cactus Dahlias, but very varied, with many beautiful autumn flowers. Goacher's crimson early Chrysanthemum was prominent and bright, also the yellow form of Marie Masse Marigolds, for which the firm are famous; were also prominent, as were a collection in vases of choice varieties of Roses, among which may be noted the little known Gus' av Regis, pale yellow, beautiful in bud; Billard et Barr, a deep orange Tea, much finer than W. A. Richardson; Madame Pernet Ducher, pale yellow; Liberty, the new crimson; Marquis of Salisbury, &c. It is a boon to see Roses in vases with their stems, to show the habit of the varieties.

During the two days of the exhibition about 13,000 visitors passed the entrance gates, and it is to be hoped that the cash receipts will be encouraging to the executive and to the energetic and talented secretary, Mr. Murray Thomson, who spared no pains to perfect every arrangement and to make everything pleasant and agreeable to both exhibitors and competitors.

## TULIPA RETROFLEXA.

To be restricted to only one species or variety of Tulip, if that were possible, would be particularly grievous, but if it came to a choice of only one, I think that *retroflexa*, the golden, would be the subject of my love. Its beautifully turned segments and lovely curving base, of a bright and clear yellow, are more chaste in my eyes than words can describe. It is undoubtedly a noble Tulip, classed amongst the cottage varieties, and seems to grow quite as freely as any other Tulip in a friable sandy loam. An open but sheltered situation should be selected for this species. The illustration is one of Messrs. Veitch's (Chelsea), and shows the flower well. In a cut state it remains fresh for ten days.—D.



### Fruit Forcing.

**LATE PEACH TREES.**—When the fruit is gathered the trees will need to have the shoots thinned where too crowded, and those which have borne fruit and are not required for extension can be cut out to a successional shoot at the base; this, with free ventilation, will assist in ripening the growths, which is of primary importance as regards next year's bearing. In cold localities, and the wood strong, it may be necessary to employ gentle fire heat in dull weather. Avoid a dry condition of the border. The trees must not lack water at the roots, and yet drier condition of the soil is advisable whilst the fruit is ripening, but anything like dryness to the extent of distress to the foliage interferes with the formation and maturation of the buds, and may seriously prejudice their retention on the trees, which simply cast them because imperfect, or impaired a vitality from various causes. Some of the late Peaches, as, for instance, Walburton Admirable, Golden Eagle, and Comet, will require gentle fire heat in cold localities to ripen them thoroughly. An occasional syringing will be necessary for trees from which the fruit has been gathered.

**UNSATISFACTORY TREES.**—Where the trees cast their buds, do not set the fruit well, or fail to stone and finish their crops satisfactorily, something is amiss either in the management or with the roots. Either the roots are too deep or the soil is too rich and loose, unsuitable material, or imperfectly drained. Trees in an unsatisfactory condition should be partially or wholly lifted as soon as the wood is mature. If this be done whilst the trees are in leaf, the house should be shaded before commencing operations, and the old border made evenly moist. In removing the soil commence at the point most distant, and work towards the trees, and when it has been cleared away the exposed roots should be drawn aside, damped, and covered with mats whilst the drainage is being attended to. This should consist of 12in thickness of rubble, largest at the bottom and smallest at the top, and if a covering be placed on of old mortar rubbish, freed from all sorts of wood, it will make all secure and be a source of calcareous matter. A drain below the rubble must be provided to carry off all water, and it must have proper fall and outlet. Strong loam is most suitable. If inclined to be light, add a fourth of clay marl, as fine as practicable; if very strong add a fourth of road scraping, and in any case a tenth of old mortar rubbish, taking care to remove laths and other pieces of wood. A cartload of wood ashes may be added to every ten cartloads of the compost, with about 2cwt of crushed bones, and a similar amount basic cinder phosphate, the whole well incorporated and put in the border firmly, and the roots, after having any fibreless portions shortened with a knife, must be spread out evenly over the bed, placing them in layers, and all within the top foot-depth of the border, the topmost roots not being covered deeper than 2in or 3in. The border need not be more than 24in deep, and in no case wider than the width or height of the trellis. A good watering will be needed to settle the soil about the roots. The shading must remain on if the weather be bright, and afford ventilation by the top lights only, syringing the foliage lightly in the morning and afternoon until it is seen that the roots are working in the fresh compost, when the shading may be removed and the house opened. Trees so treated rarely cast their buds, the flowers or fruit set well—indeed, the operation of lifting is the only method of successfully treating trees in an unsatisfactory condition from root causes.

**LATE MUSCAT GRAPES.**—Where these are not thoroughly ripe a rather warm atmosphere by day with a free circulation of air, and enough at night to prevent the deposition of moisture on the berries, will be needed some time longer, indeed, it should be continued until the Grapes are finished, when a gradual reduction of temperature must take place, about 50deg by artificial means being necessary for Muscats after they are matured. Moisture must be kept down by the bracing atmosphere, a pent up air with a sudden increase of temperature from sun being sure to induce moisture to condense on the berries, which will cause them to spot, and then the Grapes will speedily decay. A little clean, dry straw or matter spread on the inside border is useful in preventing moisture rising. The Grapes in these will now have finished, but it is well to make sure that such is the case quite up to the shank of the berries, before ceasing the needful aid from fire heat. All late thick-skinned Grapes require a long time to mature after being apparently ripe, consequently a temperature of 55deg should be allowed, with a rise of 5deg to 10deg by day, and a circulation of air until the foliage is giving indications of falling,

when a temperature of 50deg will be sufficient. The inside border must not be allowed to become too dry. If necessary, water in the early part of a fine day, and cover with a dry mulch as a safeguard against damp, and a repetition of the watering. Outside borders will be quite damp enough from the recent rains, and should be covered with lights preferably, or some other means employed to throw off heavy soaking rains. Where the Grapes are not finished they must be treated similarly to late Hamburgs in order to mature.

**LATE HAMBURGS.**—These finish and colour when it is almost hopeless to do anything more with the thick-skinned varieties, but they are best finished as soon after this as possible. When not ripe they should have a temperature of 60deg to 65deg at night, and 70deg to 75deg in the daytime, with a circulation of air constantly, not allowing the border to become dry, but giving a good watering if they are only partially advanced in colouring, and mulch with short dry material. Only restrict the laterals to prevent overcrowding, but after the Grapes are finished avoid further extension, yet not reducing the foliage too much, as this assists Hamburgs to keep their colour.

### The Kitchen Garden.

**LETTUCE.**—Lettuce plants, intended to be planted out, should now be in their permanent quarters, so that they may become well established before winter. Lettuce will succeed very well in all but the dampest positions and heaviest soil. Well drained soil suits it best for the winter season. It is found desirable to plant in sheltered places under walls, these positions affording some natural protection. Birds are found to be troublesome by pecking at the leaves, which, of course, prevents growth. In this case, cover the plants with netting or stretch black cotton over them. Frequently hoe among the plants, and dust lime or soot between to keep down snails.

**SPINACH.**—The winter Spinach should have the soil between the rows kept clean, and any densely crowded patches of plants should be thinned. At this season the plants do not require to be thinned too far apart. Remove weeds, and lightly hoe the spaces between the rows.

**CELERY.**—A few more rows should be earthed finally, deferring the operation with the latest rows for a few weeks, so as to give them time to complete their growth. A convenient method of earthing consists, first, in lightly drawing the leafstalks together, so as to well enclose the centres or hearts of the plants, securing them in position with raffia grass ties; then break up the soil on each side of the rows, making it fine and crumbly. Arrange the soil in a line on each side of the rows, and work it round the plants with the hands. At the same time, form a good base on which to place more soil. None should be worked round the plants higher than the centres, except at the final earthing. Earthing can only be satisfactorily done when the weather is dry, as well as the plants. Soil that is more than ordinarily retentive, wet, and heavy, may not be suitable for earthing. The introduction of some light material, such as coal ashes, may be admitted for placing directly round the plants.

**POTATOES.**—The lifting of the Potato crop continues to be a most important operation. Dry weather must be chosen, if possible, digging up no more tubers in one day than can be sorted, dried, and stored. Select clean, sound, medium sized tubers to save for seed. Store these singly in shallow boxes, which may be stood on a shelf in a cool structure. The large tubers for use, after being thoroughly dried, may be placed in bags, boxes, or in a heap in the store room, covering them over entirely with straw to exclude light. Where the crop is more than usually productive, a portion should be clamped in the open, covering with straw and soil.

**TOMATOES.**—The fruit secured on the outdoor plants will, in many cases, fail to fully ripen; hence some glass lights ought to be placed in front of the plants to give them extra warmth and forward the colouring. When the fruits do commence to colour they may be cut and finished under glass or in a warm kitchen. The small, green fruits may be utilised in pickling.

**ONIONS.**—The crop of summer Onions, if not harvested, should now be pulled up and dried in the sun and air. If wet, transfer them under cover, but do not store them until thoroughly dry. A little thinning of the seedling plants may be given the rows of winter Onions; also remove weeds and lightly stir the soil.

**CABBAGE.**—Augment the number of plants, if necessary, which have been placed out for the spring supply. Strong and useful plants can be secured from the seed beds. Lift with a fork or trowel, and plant without loss of roots, a foot apart in rows 2ft asunder. Plants pricked out have grown strongly, and these ought also to be lifted, with ample soil adhering, planting with a spade. Afford these more space between the plants in the rows. Stir the soil with the hoe as soon as the Cabbages are established, and continue to maintain an open, clean surface, which will promote steady growth.—EAST KENT.



## TO CORRESPONDENTS

\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**LEAVES OF BEGONIAS DISFIGURED** (A Reader, Cambs.).—The leaves of Gloire de Lorraine are infested by the Begonia leaf-rust mite, *Tarsonymus Begoni*, a very pernicious creature, as by its piercing of the tissues and the mode of life of the larvæ causes leaves to become crumpled, stunted and disfigured, the under side having a rusted appearance, and sometimes they are so bitten and poisoned evidently, that they often fall off to a great extent. The leaves of Begonia weltoniensis are infested by the same pest, but in a less degree, the mite not being so fond of this species as of the more fleshy leaves of Gloire de Lorraine. The only thing as yet found of any use is spraying or dipping in tobacco water, made by placing an ounce of the strongest shag tobacco in a vessel and pouring on a quart of boiling water, covering close, and leaving until cool, then straining and spraying on the under side of the leaves, the plants being held upside down, or in case of a large number of plants more tobacco water may be made of a similar strength so as to admit of dipping them. The spraying or dipping should be repeated two or three times at intervals of about a week.

**CUCUMBER AND TOMATO PLANTS DYING** (T. P. R.).—The Cucumber plant has the leaves affected by leaf-spot fungus, *Cercospora melonis*, but the sudden collapse of the plant is due to a stem affection closely allied to sleeping disease in Tomatoes, *Fusarium Lycopersici*, which infests the vascular bundles, and prevents the flow of sap, hence the sudden collapse of the plant. The Tomato stem certainly has some "black stripe," but the cause of the collapse is sleeping disease. Probably both the affections of the stems is only a form of *Fusarium solani*, most likely encouraged by the high-feeding conditions under which both Cucumbers and Tomatoes are grown, the former being treated more like aquatics than under rational conditions befitting plants that never thrive in deluged soil, and require naturally a well aerated atmosphere. There certainly is not any remedy for the sleeping disease, and the best preventive is to treat the compost with a mixture of 8 parts basic cinder phosphate and 3 parts refined kainit, sprinkling on the freshly cut turfy loam at the rate of 4oz per square yard as the turf is stacked in autumn per 3in thickness, or on each layer of turves as placed on grass side downwards. In cutting down the turf stack it should be from top to bottom, and mixing the whole well before use. For the Cucumber leaf-spot there does not appear any remedy. Bordeaux mixture not acting as either preventive or repressive, and the removal of affected leaves not retard the advance of the fungus, it attacking the very young leaves and preventing further profitable growth.

**FORCING LILY OF THE VALLEY** (R. S.).—Either home-grown or imported Berlin crowns should be used for early forcing, and for very early work retarded crowns should be employed. They should be placed rather thickly in pots or boxes, and a little light soil or cocoa-nut fibre lightly shaken amongst the roots, but not over the tops; they should be covered with moss. Another plan is to insert them similarly in propagating frames and pot them, if so desired, as they come into flower. The roots do not grow during this period, consequently it is immaterial which method is adopted. Plunge in a bottom heat of about 85deg, and if possible maintain a top heat of 70deg to 75deg. This encourages the production of leaves and flowers at the same time. If pots or boxes are used, empty ones of a similar size may be inverted over them to keep the crown in a darkened position. This is considered beneficial in assisting in starting them into growth. When close frames are used, similar conditions may be secured by covering the sashes so as to exclude the light. It is important that the soil be placed as lightly as possible about the roots, in order that the heat may pass readily through it. Water of the same temperature should be given often enough to keep the whole well moistened. The very earliest batch of the current year's crowns not unfrequently fails under such hard forcing conditions, hence retarded crowns should be selected. If good crowns are employed after November, and proper attention is given in forcing, each batch of the late ones may generally be relied upon to produce good flowers. Clumps are forced in quantities after Christmas; some of them, if well ripened, may be utilised at any season. In forcing retarded crowns in summer, a temperature of about 65deg is sufficient.

**VARIETY OF RASPBERRY** (William Smith).—We do not comprehend your letter. Is the Raspberry a cross, or what? The fruits were all destroyed on their arrival. We fear it is a useless sort.

**TOBACCO WATER** (C. N.).—Use two gallons to three gallons of water: if hot, the tobacco juice will the sooner be expressed and mingle with the liquid. The aim is to have a distasteful liquid to coat the leaves with, and so prevent the attack of insects. Indeed, there is no need to rigidly measure the water, but by using judgment you may make a safe and sufficiently strong tobacco solution for your purpose without measuring.

**BOOK ON FARMING** ("J.").—Procure Dr. Freaux's "Elements of Agriculture" (John Murray, London, 3s. 6d. net), which we think may suit you. If not, let us know. The newspapers devoted to agriculture are: "North British Agriculturist" (Edinburgh); "Irish Farming World" and the "Farmers' Gazette," both from Dublin; "Farm and Home," the "Agricultural World and Cable," "Profitable Farm and Garden," and "Farm, Field, and Fireside." No doubt there are others specially devoted to agriculture. Do you peruse our own Home Farm page?

**THE "PATTISSON" LAWN BOOTS.**—We desire in this place to bring to notice an improved lawn boot for horses, samples of which have been frequently exhibited. At meetings of the Royal

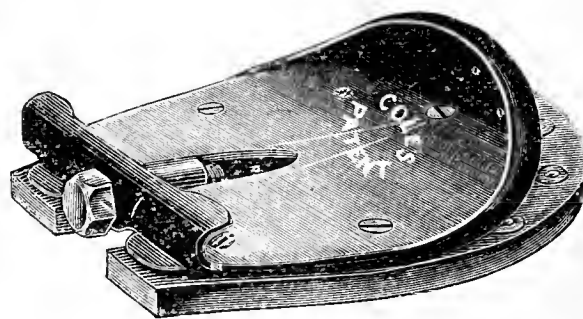


Fig. 1.

Horticultural Society during last summer, in London. We believe that these boots, from their improvement in strength, adjustability, and comfort to the horse, will be almost solely used, once they become better known. At present they are sold by Mr. H. Pattisson, 55, Killieser Avenue, Streatham Hill, London, S.W. We do not rest in our recommendation of them, on our own opinions alone, but are supported by a large number of leading gardeners, both in and around the metropolis, and the provinces. The boots have also been for three years in use on the Oval cricket pitch, which is of itself sufficient to guarantee their merits. The boot, as shown in fig. 1, is fitted with a strong steel plate turned up at the toe, and having an adjustable screw clamp at the heel, by means of which it is attached very quickly and firmly to the horse's shoe. There is not the slightest pressure on the hoof, and the frog and fetlock are as open to the air as they would be without it, so that the horse works with much greater ease and comfort ("as though he had nothing on his feet,") than is possible with any other boot. The patented "Compactum" Sole is the most durable possible, being made of the best water-proofed English sole leather, in which are embedded (at the points of wear) two or more rubber discs of special quality which add greatly to the durability of the leather, and also render the sole practically non-slipping. It is at the same time kept firm and in shape by the steel plate, and is absolutely prevented from wearing into holes, as happens with all other boots. Fig. 2 is the same boot, but fitted with a leather upper and strap fastening instead of the screw clamp, and is suitable for shod or unshod horses. The toe of the steel plate takes the forward pressure of the hoof, thus saving the front of the boot from wear. It is impossible to have a better boot of this shape. These boots are very durable.

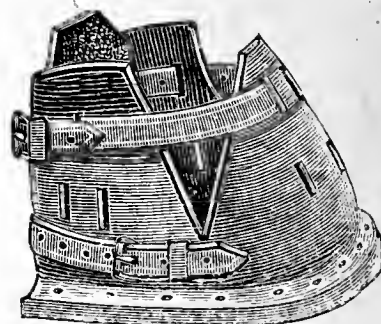


Fig. 2.

**CHRYSANTHEMUM LEAVES BLIGHTED** (A Reader, Cambs.).—The leaves are infested by the Chrysanthemum leaf blight, caused by a fungus named *Cylindrosporium Chrysanthemi*, which is proving very destructive to Chrysanthemums this season. At first small reddish spots appear on the leaves, and these soon increase to large dark blotches, and the leaves turn yellow, ultimately brown or black, shrivel and hang down and lie close to the stem. In consequence of attack, the flower buds do not expand properly, and sometimes not at all. Numerous fruiting pustules are formed on the diseased patches, and produce countless spindle or club-shaped, colourless septate spores, which rupture the epidermis of the leaf, become diffused, and spread the disease rapidly. Spraying with fungicides has not any apparent effect on the fungus, but probably early spraying or dusting with a fungicide would prevent attack. The best course is to remove and burn affected leaves. Probably the wet weather has favoured the fungus, and the hailstorm to which you allude would certainly make matters worse.

**SMALL COLLECTION OF ORCHIDS (S. S.).**—For the sum you name, £15, you may get together an extremely interesting small collection of Orchids, but to do so you should buy a few at a time as occasion offers. To take this amount to a nurseryman and buy at catalogue prices would only result in disappointment, but there are frequent sales in London and other towns of established and newly imported plants, where numbers of healthy Orchids are sold at very low rates. If you cannot attend the sales yourself obtain a catalogue and ask the auctioneer to buy and forward to you any lots you mark if they go at a cheap figure, leaving it in his hands to decide the value, or telling him how high you care to go for certain lots. To mention half the suitable kinds would take far too much space, but a few are flowering species. *Anguloa Clowesi*, the Cradle Orchid. *Cattleya* flowering species. *Anguloa Clowesi*, the Candle Orchid. *Cattleya citrina*, a bright yellow species that should be grown on cork or wood blocks. *Celogyne cristata*, a white-flowering species, most useful for cutting or display upon the plants. *Cymbidiums giganteum*, *eburneum*, and *Lowianum*, handsome plants, whether in or out of flower, and lasting many weeks in full beauty. *Cypripediums* in variety, including *C. insigne*, *C. villosum*, *C. Sedeni*, *C. venustum*, *C. Ashburtoniae*, *C. Leeannum*, *C. Sallieri*, and others. *Epidendrum vitellinum majus*, one of the finest of cool Orchids, with bright scarlet and yellow blossoms; *Lælia anceps* and *L. autumnalis*, *Masdevallias* in variety, four of the best being *M. Harryana*, *M. Veitchi*, *M. Lindeni*, and *M. Tovarensis*, the last-named being the only white-flowering species. *Maxillaria grandiflora*, *Lycaste Skinneri*, one of the best; *Odontoglossum crispum*, *O. Pescatorei*, *O. cirrhosum*, *O. triumphans*, *O. luteo-purpureum*, *O. grande*, *O. Insleayi*, *O. citrosimum*, and *O. Rossi*. These are the cream of the genus. Among *Oncidiums* are *O. concolor*, *O. Marshallianum*, *O. tigrinum*, and *O. flexosum*. *Pilumna fragrans*, *Pleione lagenaria*, and *P. maculata*. *Sophronitis grandiflora* can hardly be left out, and this will be forty of the most beautiful Orchids in cultivation, all easily grown, cheap, and floriferous.

**NAMES OF FRUIT.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (W. P.).—Plum. *Victoria*. (N.).—Apples: 1, *Beauty of Kent*; 2, *Beauty of Bath*; 3, *Duchess' Favourite*; 4, *Ribston Pippin*. (J. F., Kelso).—Plums: 1, *Jefferson*; 2, *Prince Englebert*. Peach, *Sea Eagle*. Nectarine, *Pineapple*.

**NAMES OF PLANTS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (P. A. T.).—The following are the names of those not named in our last. We received another lot on Tuesday last which you will have the names of in our next. We have had no leisure for naming them: 1, *Thuja occidentalis Wareana*; 2, *Thuja occidentalis*; 3, *Abies pinsapo*; 4, *Cryptomeria elegans*; 5, *Juniperus* var.; 6, *Prumnopitys elegans*. (Stoney Park).—All are British, or varieties of same. Nos. 1 and 6, *Aspidium angulare*; 2, *Aspidium aculeatum cristatum*; 3, *Asplenium Filix-fœmina* var. *cruciatum*; 4, *Asplenium Filix-fœmina* var. *cristatum*; 5, *Polypodium vulgare* var. *cambricum*; 7, *Mentha officinalis variegata*. (Hants)—1, *Cupressus Lawsoniana*; 2, *Pseudotsuga Douglasi*; 3, *Cedrus Deodara*; 4, *Cupressus pisifera* var. *plumosa argentea*; 5, *Taxus baccata* var. *fastigiata aurea*; 6, *Abies nobilis*; 7, *Osmanthus aquifolium* var. *ilicifolius*; 8, *Osmanthus aquifolium* var. *ilicifolius variegatum*; 9, *Escallonia rubra*. (T. W.).—1, *Begonia corallina*; 2, *Begonia purpurea*; 3, *Begonia maculata*; 4, *Codiaeum*, probably *Heathi elegans*; 5, *Maranta zebrina*; 6, *Caladium* sp., stalk wanted.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.               | Direction of Wind. | Temperature of the Air. |           |          |         | Rain.          | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|---------------------|--------------------|-------------------------|-----------|----------|---------|----------------|---------------------------------------|----------------|----------------|------------------------------|
|                     |                    | At 9 A.M.               |           | Day.     | Night   |                | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                     |                    | Dry Bulb.               | Wet Bulb. | Highest. | Lowest. |                |                                       |                |                |                              |
| 1902.<br>September. |                    |                         |           |          |         |                |                                       |                |                |                              |
| Sunday ...14        | S.W.               | deg.                    | deg.      | deg.     | deg.    | Ins.           | deg.                                  | deg.           | deg.           | deg.                         |
| Monday ...15        | S.W.               | 57.6                    | 53.8      | 61.6     | 52.2    | 0.03           | 57.5                                  | 58.3           | 57.9           | 49.2                         |
| Tuesday...16        | W.                 | 55.9                    | 54.6      | 64.6     | 55.0    | 0.04           | 58.0                                  | 58.2           | 57.8           | 49.4                         |
| Wed'sday 17         | W.N.W.             | 55.6                    | 49.3      | 60.2     | 44.5    | —              | 57.1                                  | 58.2           | 57.7           | 33.0                         |
| Thursday 18         | W.N.W.             | 53.8                    | 47.9      | 60.0     | 40.0    | —              | 55.8                                  | 57.8           | 57.6           | 29.8                         |
| Friday ...19        | S.E.               | 44.9                    | 44.8      | 63.4     | 36.3    | —              | 54.5                                  | 57.2           | 57.3           | 29.0                         |
| Saturday 20         | S.E.               | 51.8                    | 50.0      | 64.0     | 38.2    | —              | 53.5                                  | 56.6           | 57.1           | 30.0                         |
| MEANS ...           |                    | 53.5                    | 50.2      | 62.1     | 44.2    | Total.<br>0.07 | 56.2                                  | 57.9           | 57.6           | 36.3                         |

The weather during the greater part of the week has been dull, with occasional bursts of sunshine; the wind has been very cold.

### Trade Catalogues Received.

East Anglian Plant Co., Great Totham, near Witham, Essex.—*Rare and Beautiful Plants*.  
James Cocker and Sons, 130, Union Street, Aberdeen.—*Dutch Flower Roots*.  
J. R. Pearson and Sons, Fruit Tree Growers, Seed and Bulb Merchants; Chilwell Nurseries, Lowdham, Notts.—*Fruit Trees*.  
Webb & Sons, Wordsley, Stourbridge.—*Cereals*.

### Covent Garden Market.—Sept. 24th.

#### Average Wholesale Prices.—Fruit.

|                          | s. d. | s. d.  |    | s. d.                     | s. d.        |
|--------------------------|-------|--------|----|---------------------------|--------------|
| Apples, English, dessert | 4     | 0 to 6 | 0  | Lemons, Messina, case     | 12 0 to 20 0 |
| "  culinary, bush.       | 3     | 0      | 5  | "  Naples, "  "           | 25 0 0 0     |
| Bananas ...              | 8     | 0      | 12 | Melons, each ...          | 1 6 2 0      |
| Figs, green, doz. ...    | 2     | 0      | 4  | Nectarines, doz. ...      | 3 0 12 0     |
| Filberts, lb. ...        | 0     | 3      | 0  | Oranges, case ...         | 16 0 21 0    |
| Grapes, Hamburgh, lb.    | 0     | 9      | 1  | Peaches, doz. ...         | 3 0 12 0     |
| "  Muscat ...            | 2     | 0      | 3  | Pears, Williams, ½-sieve  | 4 0 6 0      |
| "  Alicantes ...         | 0     | 9      | 1  | "  Hazels, ½-sieve...     | 3 0 4 0      |
| "  Colman ...            | 0     | 9      | 1  | Pines, St. Michael's,     |              |
|                          |       |        |    | each ...                  | 2 6 5 0      |
|                          |       |        |    | Plums, Victorias, ½-sieve | 0 0 4 0      |

#### Average Wholesale Prices.—Vegetables.

|                         | s. d. | s. d.  |   | s. d.                    | s. d.      |
|-------------------------|-------|--------|---|--------------------------|------------|
| Artichokes, green, doz. | 2     | 0 to 3 | 0 | Lettuce, Cabbage, doz.   | 0 6 to 0 9 |
| "  Jerusalem, sieve     | 1     | 6      | 0 | "  Cos, doz. ...         | 0 9 1 0    |
| Batavia, doz. ...       | 2     | 0      | 0 | Marrows, doz. ...        | 1 0 0 0    |
| Beans, French, lb. ...  | 0     | 2      | 0 | Mint, doz. bun. ...      | 4 0 0 0    |
| "  broad ...            | 3     | 0      | 4 | Mushrooms, forced, lb.   | 0 8 0 0    |
| "  Scarlet Runners      | 2     | 0      | 2 | Mustard & Cress, pint.   | 0 2 0 0    |
| Beet, red, doz. ...     | 0     | 6      | 0 | Parsley, doz. bnchs. ... | 3 0 0 0    |
| Cabbages, tally ...     | 3     | 0      | 4 | Peas, blue, bushel ...   | 3 0 4 0    |
| Carrots, new, bun. ...  | 0     | 2      | 0 | Potatoes, English,       |            |
| Cauliflowers, doz. ...  | 3     | 0      | 0 | new, cwt. ...            | 5 0 6 0    |
| Corn Salad, strike ...  | 1     | 0      | 1 | Radishes, doz. ...       | 1 0 0 0    |
| Cucumbers doz. ...      | 2     | 6      | 4 | Spinach, bush. ...       | 2 0 3 0    |
| Endive, doz. ...        | 1     | 6      | 0 | Tomatoes, English, lb.   | 0 4 0 5    |
| Herbs, bunch ...        | 0     | 2      | 0 | "  Jersey... ...         | 0 0 0 3    |
| Horseradish, bunch ...  | 2     | 6      | 0 | Turnips, bnch. ...       | 0 2 0 3    |
| Leeks, bunch ...        | 0     | 1 ½    | 0 |                          |            |

#### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                          | s. d. | s. d.   |    | s. d.                      | s. d.      |
|--------------------------|-------|---------|----|----------------------------|------------|
| Aralias, doz. ...        | 5     | 0 to 12 | 0  | Foliage plants, var, each  | 1 0 to 5 0 |
| Araucaria, doz. ...      | 12    | 0       | 30 | Fuchsias ...               | 0 0 0 0    |
| Aspidistra, doz. ...     | 18    | 0       | 36 | Grevilleas, 48's, doz. ... | 5 0 0 0    |
| Chrysanthemums ...       | 6     | 0       | 12 | Lycopodiums, doz. ...      | 3 0 0 0    |
| Crotons, doz. ...        | 18    | 0       | 30 | Marguerite Daisy, doz.     | 4 0 6 0    |
| Cyperus alternifolius    |       |         |    | Mignonette ...             | 0 0 0 0    |
| doz. ...                 | 4     | 0       | 5  | Myrtles, doz. ...          | 6 0 9 6    |
| Dracæna, var., doz. ...  | 12    | 0       | 30 | Palms, in var., doz. ...   | 15 0 30 0  |
| "  viridis, doz. ...     | 9     | 0       | 18 | "  specimens ...           | 21 0 63 0  |
| Ferns, var., doz. ...    | 4     | 0       | 18 | Pandanus Veitchi, 48's,    |            |
| "  small, 100 ...        | 10    | 0       | 16 | doz. ...                   | 24 0 30 0  |
| Ficus elastica, doz. ... | 9     | 0       | 12 | Shrubs, in pots ...        | 4 0 6 0    |

#### Average Wholesale Prices.—Cut Flowers

|                           | s. d. | s. d.  |    | s. d.                    | s. d.        |
|---------------------------|-------|--------|----|--------------------------|--------------|
| Arums, doz. ...           | 3     | 0 to 0 | 0  | Lily of Valley, 12 bnchs | 12 0 to 18 0 |
| Asparagus, Fern, bnch.    | 1     | 0      | 2  | Maidenhair Fern, doz.    |              |
| Bouvardia, coloured,      |       |        |    | bnchs. ...               | 5 0 6 0      |
| doz. bunches ...          | 6     | 0      | 0  | Marguerites, white,      |              |
| Carnations, 12 blooms     | 0     | 6      | 1  | doz. bnchs. ...          | 2 0 0 0      |
| Cattleyas, doz. ...       | 0     | 0      | 12 | "  yellow, doz. bnchs.   | 1 0 0 0      |
| Chrysanthemums, doz.      |       |        |    | Myrtle, English, per     |              |
| bun. ...                  | 3     | 0      | 4  | bunch ...                | 0 6 0 0      |
| doz. blooms ...           | 1     | 0      | 1  | Odontoglossums ...       | 4 0 0 0      |
| Cornflower, doz. bun.     | 0     | 0      | 0  | Orange blossom, bunch    | 2 0 0 0      |
| Croton foliage, bun. ...  | 0     | 9      | 1  | Roses, Niphetos, white,  |              |
| Cycas leaves, each ...    | 0     | 9      | 1  | doz. ...                 | 1 0 2 0      |
| Cypripediums, doz. ...    | 2     | 0      | 3  | "  pink, doz. ...        | 2 0 0 0      |
| Eucharis, doz. ...        | 1     | 6      | 2  | "  yellow, doz. (Perles) | 1 0 1 6      |
| Gardenias, doz. ...       | 2     | 0      | 0  | "  Generals... ...       | 0 5 0 6      |
| Geranium, scarlet, doz.   |       |        |    | Smilax, bunch ...        | 2 6 0 0      |
| bnchs. ...                | 4     | 0      | 0  | Stephanotis, doz. pips   | 2 6 3 0      |
| Gladiolus, white, doz.    |       |        |    | Stock, double, white,    |              |
| bunches ...               | 3     | 0      | 4  | doz. bun. ...            | 2 0 3 0      |
| Ivy leaves, doz. bun. ... | 1     | 6      | 0  | Sweet Peas, white and    |              |
| Lilium Harrisii ...       | 2     | 6      | 3  | coloured, dozen bun.     | 0 0 0 0      |
| "  lancifolium alb.       | 1     | 6      | 2  | Tuberose, dozen... ...   | 0 3 0 4      |
| "  l. rubrum... ...       | 1     | 0      | 1  | Violets, doz. bun. ...   | 1 6 2 0      |
| "  longiflorum ...        | 2     | 0      | 3  |                          |              |





## Live Stock Prospects.

With an abundance of keep in the pastures, and the promise of still greater abundance in the Turnip fields, with full stackyards and fat hayricks, we might readily expect a boom in the live stock trade, but up to the present matters are remarkably slack. A rising of the tide appears to us inevitable, and we may not have long to wait for its commencement. Both beef and mutton are much dearer than they were last autumn, yet store sheep and cattle are still a dragging trade, and once more have we to chronicle disappointment at the autumn ram sales. There can be no doubt that farmers have been hard hit the last three seasons, and they can no longer afford to give fancy prices for sires, especially as wool can only realise 6d. per lb.

That the wool question is the most active cause of the depression is apparent when we see how great is the slump in Lincolns and Leicesters. About five years ago at the chief sales of Lincolns averages of forty or fifty guineas per head were frequently recorded, whilst on two occasions Mr. Dudding had an average of more than eighty guineas. This season the same breeder can only reach about fifteen guineas, whilst those who had been making forty guineas have to be satisfied with eight or nine. Last year hundreds of fine Lincoln rams were sold for three guineas each, or even less, and so far as the sales have progressed the experience is in danger of being repeated. Lincoln mutton is not popular with the best customers, and only a revival in the wool trade can resuscitate the Lincoln.

On the contrary, black-faced sheep are meeting a fair competition. Hampshires, Downs, and Shropshire, though not so dear as ten years ago, are in healthy demand, at prices which should be remunerative. At Mr. East's sale of Hampshire ewes at Hazeldown, 1,049 averaged 60s. 9d. each, and 270 ewe lambs made 44s. 6d. each. At the dispersal of Messrs. Barr's Shropshires, at Odstone, rams averaged £16 13s.; shearling ewes, £4 14s. 2d.; stock ewes, £4 16s. 4d.; and ewe lambs, £2 10s. 4d. At the annual sale of Shropshires at Birmingham, satisfactory prices, ranging up to twenty-seven guineas, were obtained, some of the animals being bought for Germany and Tasmania. For Shropshires, Hampshires, and Oxford Downs there is a much better general demand than there is for the white-faced long wools; by a general demand we mean for the ordinary type as apart from pedigree animals. There is, doubtless, a considerable change taking place in favour of down breeds. In those counties which have been given over almost entirely to the Leicester and Lincoln, cross-breeding is very much on the increase. Not only are farmers importing black-faced rams to mate with long-wool ewes, but numbers of down ewes have been purchased for breeding early lambs. The dam will be also fed off and sold during the ensuing summer. It is gratifying to see farmers getting out of the old ruts. Mutton of the down or cross-bred type defies the competition of imported meat. The great markets are never overdone with it, as they so often are with the over-fat Lincoln and Leicester mutton.

If we do not see a very pronounced rise in sheep as soon as the thrashing machine gets well to work, we need never make another forecast. There are so many things in favour of it. A plethora of fog and aftermath, a fine root crop, plenty of hay, a magnificent plant of young seeds, and small foreign imports. Farmers have been unwilling sellers. When they have money they will buy, and the competition between them and the butchers may bring about something surprising. The fine plant of seeds for next year's pasture must ensure a firm trade for at least twelve months.

The agricultural returns show that we had less sheep last June by 600,000 than we had twelve months before. The number of lambs was about the same, but ewes had diminished by 170,000, and other sheep over one year by 420,000. What is the state of things as regards cattle? The returns show a loss on the year of 208,000, representing a percentage of three. There were 46,000 less breeding cows,

95,000 less cattle over two years (not breeding or milking), 42,000 less yearlings, and 44,000 less calves, under one year. The great diminution in cattle over two years, which represent our home beef supply, is the most striking feature of this report. The percentage is nearly eight, and this shortage in the supply might have had even greater effect on beef prices than has in reality occurred. But it is the future we are dealing with, and it requires little foresight to predict that if farmers are to consume the supplies of roots and forage now in sight, there will be but very small numbers of cattle to spare for the butcher before February or March. Much depends on the autumn corn markets. If farmers are able to realise sufficient money by their sales of grain and Potatoes they will be in a position to keep their diminished flocks and herds off the markets until spring approaches, and in the absence of increased imports from abroad which are far from likely, the British farmer may be for once, if only for a short period, master of the situation. It is almost certain, in our opinion, that meat will be dear this winter; perhaps the prices may approach those which prevailed in 1872-4.

The decrease of 46,000 in the number of cows and heifers is rather a serious matter, for it must have some effect on the supply of milk. If cattle increase all round in price, the rearing of calves will be encouraged, and the supply of milk cows for the town dairies be restricted. As young cattle are relatively dear now, calf-rearing will almost surely increase. In the present state of our herds, especially as regards our breeding stock, it is most desirable that every heifer calf should be reared, and though it might be a little arbitrary, an embargo against the slaughter of all female cattle under three years of age would do more good than harm to British agriculture.

## Work on the Home Farm.

We have had rain almost daily, yet have made fair progress with harvest during the week. The crops are practically all in stook; only a field or two of Rivett's Wheat and late-sown Barley remain standing. The weather has been too unstable to favour Barley stacking, and the fine crops of this cereal are still in the fields. A considerable quantity of Wheat has been led and some Oats. The Wheats have taken more carting than was expected, and the sheaves are heavy enough to warrant the expectation of a good yield. The grain is plump and well fed, strikingly so for such a late season. Barley has got a good deal stained, and there will be few bright samples.

There has been great difficulty in getting men to tie the Barley up after the reapers. Men, who a few years ago left other occupations for a temporary spell of harvesting, but have not been required the last year or two owing to the use of self-binders, have refused with scorn the old prices, and have practically obtained what they liked to ask for on the present occasion. Barley crops are heavy certainly, but 7s. 6d. per acre is a heavy price for tying up and stooking, and that price has been frequently given.

There will be nice pickings for the pigs on the Barley stubbles where Standwell or Goldthorpe has been grown. The ground is strewn with necked ears in some places. Wrench's Prolific, which has become very popular about here, has not suffered in that way, its growth being similar to the old Chevalier. Some of the fields of this kind have been terribly laid, and the grain will be both small and dingy.

As soon as possible we shall put the cultivator through a piece of Wheat stubble, and prepare it for winter tares. After being cultivated, twelve loads of good muck per acre will be ploughed in and the seed sown at once. Ten pecks per acre will be sufficient for immediate sowing. In another month twelve will be required. We drill ours, but some people broadcast by hand. The seed is more easily covered after the drill, and less likely to be robbed by pigeons, which are very fond of it.

As we wrote a month ago, a neighbour was spraying his Potatoes. The work was not well done, and appeared to us very much belated. The results are a striking testimony to the value of spraying, as far as present appearances go. The uneven and patchy way in which the work was done has provided a splendid test. The most unobtrusive person could not help remarking the extraordinary difference between dead, or dying, and vigorously growing haulm on closely adjacent patches. In other places the gradual change in appearance is ample evidence of the slow clogging up of the strawsoniser, and a sudden change once more to healthy growing conditions shows the place where the machine was stopped and put into effective order. Such an absolutely conclusive test could hardly have been organised with intention and carried out so well. This was done on August 15, which would be considered very late for spraying. The machine was a new one, and sent by Messrs. Strawson on approval. There should be a sale.



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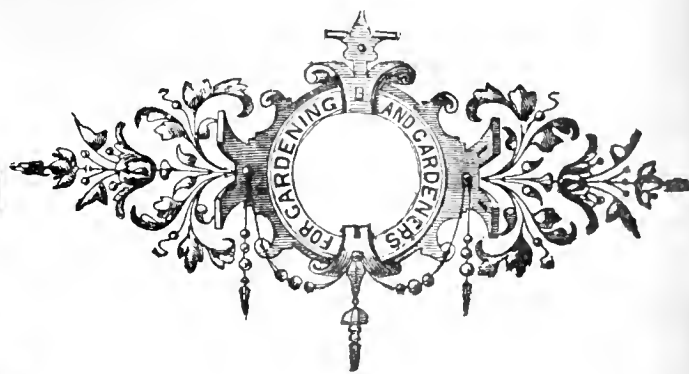


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## Journal of Horticulture.

THURSDAY, OCTOBER 2, 1902.

## Decorations of Autumnal Leaves.



**B**ELIEVING that information or suggestions on such a subject as the above will be useful at this season, "the afternoon of the year," we print the following from an American contemporary:—"Since an observant American woman has taught the Parisian belles how becoming our

autumn leaves are to dark-haired ladies, and thus created a demand for this foliage as a personal decoration, its wonderfully varied tintings have been more generally noticed and admired; and many attempts are made to retain this beauty, which, when properly preserved and managed, gives elegance to the humblest apartment.

"Though a few trees may ripen their leaves in August, it is not till the middle or last of September that we can obtain them in variety; while even as late as November we must wait for some species. Then, whether we pick them from the ground or cut twigs and branches from the trees, only the most perfect in form, and the clearest in their hues, and the most nicely shaded should be selected, being careful that each leaf has its stem uninjured.

"As soon as possible after gathering them the leaves must be pressed. If they begin to wilt or shrivel before you are ready to press them, put them in water, and keep them there till they revive. See that no soil, no foreign substance of any kind, is on either side, and then with a warm, not hot, flat iron press and iron each leaf on its upper surface till it is perfectly dry; spreading it for this purpose on several layers of paper, or on an ordinary ironing-board, just as if it were cotton cloth. This over, oil each leaf on the same side on which it was ironed with linseed, olive, or lard oil, using a small camel-hair brush, or a bit of

**R**EADERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.



cotton batting tied to a stick, and then place them on dishes in the sunshine to dry. When dry, reject all those that have a semi-transparent or oily appearance; to prevent this, get the thickest leaves you can for your collection, and do not oil them too generously nor with a rough brush.

"If you wish to arrange the leaves in boughs, or sprays, or long garlands, procure a few knots of brown worsted, and a quantity of fine wire; old bonnet-wire cleared of its covering, or the wire from the heading of old brooms, is of the right size, and very convenient to use. When the oiled leaves are dry, assort the different kinds according to their species—that is, place the Rock or Sugar Maples together, then the Red or Swamp Maples, the English Elms, the American Elms, the White Oak, the Black Oak, and so on; because, though several species are allowable in a garland, it would be unnatural to mingle them in sprays or boughs. The only proper way, however, of bringing them together is to bind the various sprays into a large bouquet; thus the contrasting forms and hues have a good effect.

"Cut the wire into pieces of different lengths. You will need a great many 3in or 4in long, several a foot long, and a few 2ft or more, according to the length of the branch or the garland you wish to make. Take the smallest leaves for the tips of the sprays and branches, and follow these with others of larger size, proceeding regularly till you have the largest leaves at the base of the branch; keeping an eye, at the same time, to the agreeable union of varying shades, and studying the marking and blotching of each leaf, so that it shall have no glaring contrast in its nearest fellows; and thus, with the greatest variety in the group, the whole are blended harmoniously and pleasantly.

"Begin your work by attaching all but the very smallest leaves to the short wires, placing the wire beneath the stem, and in such a manner that it strengthens its whole length; and then wind the worsted around both so closely and tightly that nothing of the stem or wire can be seen. Then take a small leaf and fasten it in the same way to a long wire, which is to be the main stalk of the branch. Along this dispose the other leaves naturally; bending the ends of their wires as needed, and covering all together by continuing to wind the worsted as before. Several branchlets or sprays may thus be gathered on one stalk, forming a large bough or a long garland. Avoid stiffness and flatness of position; set and bend the stems in a life-like manner. For this the wire stems are a great advantage. They also contribute to the durability of the leaves, which, if preserved with no support save their own stems, are soon broken unless extreme care is taken.

"The beauty of Oak leaves is much enhanced if clusters of acorns in their cups are introduced among them. The cups must be punctured with an awl, to admit the end of the wire that is to serve as a stem, and the acorns then glued to the inside of the cups. When these are dry, wind the wire with the brown worsted as in uniting the leaves. Birch burrs must be glued directly to the wire, which it will be convenient to wind with the worsted, and form into a branch before the glueing takes place. They are a pretty addition to branches of the golden Birch leaves.

"These boughs and garlands, arranged tastefully in vases, drooping around pictures or statuary, or hanging upon the walls of a room, seem to lend it the sunshine of a perpetual Indian summer. The most desirable leaves for this purpose are those of the Oak, Maple, Elm, Sumach, Birch, and wild Cherry; though contributions from woody shrubs and garden bushes never come amiss, if of substantial texture and smooth surface; and green leaves of Ferns—fronds of the common Brake—with their long plumes of verdure, make an agreeable contrast to more brilliant colours and more fanciful shapes. Fern leaves should be ironed in the same manner as other foliage; but they need no oiling, and if not hung where the air is intensely hot and dry, will remain handsome several months.

"It is a mistaken notion that autumn leaves need varnishing. Varnish makes them brittle, and more liable to crack; while the excessive lustre that it imparts is unnatural. Oiling gives sufficient polish, deepens, clears, and preserves the colours, and keeps the tissues somewhat elastic. When the leaves get dusty wipe them with a damp cloth. If they curl, damp them, and place the branch for a few hours between papers under a pile of heavy books.

"The changed leaves of autumn may also be used for other ornamental purposes. Small wreaths to surround unframed pictures can be made, fastening the wired stems by sewing, or by winding with worsted, to a narrow circle of pasteboard, or a ring of wire-taste; the Sumach, Elm, or Cherry leaves are best for these. And carving may be successfully imitated with Oak leaves and acorns. For this, glue the under surface of the leaves to a picture frame of pasteboard, or of wood stained a dark colour; cut the acorns, and their cups also, in halves, and intersperse them among the leaves, glueing them in a flat position, and then varnish the whole. The same work makes a pretty front for a bracket. And little sprigs and branches of Maple, Elm, or Cherry, with their natural stems, may be ironed, and then fastened with gum tragacanth to the pretty white-wooded boxes, letter cases, and other articles that are prepared for painting and decalcomanie; being afterwards lightly varnished, or not at all, according to fancy. Sprays of Maple or Elm, or Oak leaves and acorns, may, in the same way, ornament pasteboard or wooden slips for letter and card racks; the lining which should be of the same shade as the leaves, being first glued to the frame."

## A Discourse on Wasps.

The monthly meeting of the Shirley (Southampton) Gardeners' Association was held in the Parish Room, on September 22, when Mr. B. Ladhams presided over a good attendance of members. The evening was an open one for discussion, which was started by the hon. secretary, Mr. J. Miles, who exhibited three wasps' nests; one built in a bellglass on the top of a bee hive, another taken from the ground and placed under a glass, and a third nest destroyed by cyanide of potassium. The former two had the wasps alive within them.

He remarked that the injuries to fruit and loss to fruit growers and gardeners by the depredations of these insects upon the ripe or ripening crops were to a greater or less extent a yearly trouble. In the year 1893, the visitation was so great that it was known as the "wasp plague." The crop of Gooseberries was completely cleared when approaching ripeness; quite two-thirds of the Pears were damaged and destroyed; Apples about one-third; and Plums about half. In another locality, Grapes in houses and outside suffered severely; all the Peaches were eaten before they were ripe, and many of the best Apples and Pears eaten out, leaving only their skins. The wasps' nests, besides being much more numerous in 1893 than in other years, were noticed in some instances as being of a greater size and more fully tenanted. One man destroyed 180 nests on 600 acres of land; 200 nests were taken in one nursery; 300 on 300 acres; and in one instance, where a bonus of 6d. per nest was given, 470 were taken within a half a mile radius of a kitchen garden which was the centre of operations. Other returns gave 20 nests ploughed up in a field, 36 taken in a radius of a quarter of a mile, and 23 nests within 96yds of a certain stone wall.

Considering the utility of the wasp, Mr. Miles said evidence showed, unquestionably, that the injuries far exceeded the benefits of its presence. In Great Britain we have seven species of social wasps, that is, of wasps living together in societies formed of males, females, and neuters, commonly known (as with bees) as drones, queens, and workers. These seven kinds are divided into two sections of (1) ground, and (2) tree wasps, according to where their nest is formed, in a hollow in the ground, or suspended in the air from a bough.

The colonies for the year are begun by the queen. At first she has to carry on all the work, to build the nest, to lay the eggs, and feed the larvæ. The wasp remains in the egg condition eight days; the larvæ thirteen, and the pupæ about ten. These are all workers, which take up the duties begun by their queen in building their home. Towards autumn a great change takes place in the nest. Only males and females are produced, and shortly afterwards the wasp colony as a social establishment comes to an end.

The males having fulfilled their allotted part by pairing with the females, die; so also do the workers. The nest decays, and all that remain of the summer colonies and their quarters are the females, which will leave the nest and hibernate in their selected shelters until spring comes round again, thus completing the year's cycle of wasp life.

One of the best things to destroy the nest and wasp is cyanide of potassium, which can be used at any time, morning, noon, or night. This being a very violent poison, Mr. Miles did not advise the use of it except in absolutely trustworthy hands. To relieve the pain of a wasp sting, ammonia, soda, chloroform, ipecacuanha, and onion juice were good remedies.—M.



### Cypripedium × Mrs. F. Hardy.

This beautiful hybrid was first exhibited from St. Albans in 1895 when it was honoured by the Orchid Committee of the Royal Horticultural Society. It was obtained as a cross between *C. superbiens* and *C. bellatulum*, and traces of both parents are readily observable. The stout petals are very distinctive, with purplish spots on an almost pure white ground. The lip is somewhat small, and is of a creamy white (very pleasing) flushed with rose, darkening towards the mouth. The large dorsal sepal is white, faintly tinged with green, and bears rows of dark maroon spots. It is a rare and beautiful hybrid.

### Dendrobiums: Their Growth and Culture.

(Continued from page 283.)

*D. chrysanthum* again is quite distinct from all others in appearance, and in cultural requirements. It commences to grow soon after the flowers are past, and is usually growing all through the winter. It is a very restless plant in fact, and should never be really dried at the roots. The flowers occur on the newly formed growths often before the leaves fall; they are deep golden yellow in colour, and with a delicious fragrance during the fortnight or so they last. Basket treatment is best for it, so that the stems may take their natural pendant direction, and the heat of the intermediate house is quite enough for it.

*D. chrysotoxum* is of the evergreen section, its flowers produced in side racemes from the bulbs, and brilliant yellow in colour. The variety *sua-vissimum*, which is often described as a distinct species I consider superior to the type; it is certainly brighter, the bright yellow segment being well shown up by the deep maroon blotches on the lips.

*D. crassinode* is one of the very finest of the deciduous sorts, and a showy and beautiful Orchid. Its thickened nodes on the stems render it easily recognisable, whether in or out of flower. The blossoms occur almost over the whole length of the stems, and are white, the sepals and petals heavily tipped with rosy purple, the lips having a large yellow area at the disc, and tipped like the outer segments. The only fault with this superb species is an inclination to go off at the base of the stems, a fault that is made worse by overwatering in the early stages. It is a native of large tracts of country about Moulmein, and is fortunately always cheap and plentiful. The principal variations from the type are the albino form and the highly coloured *Barberianum*, the latter being rare, though scores of plants are sent out under this name.

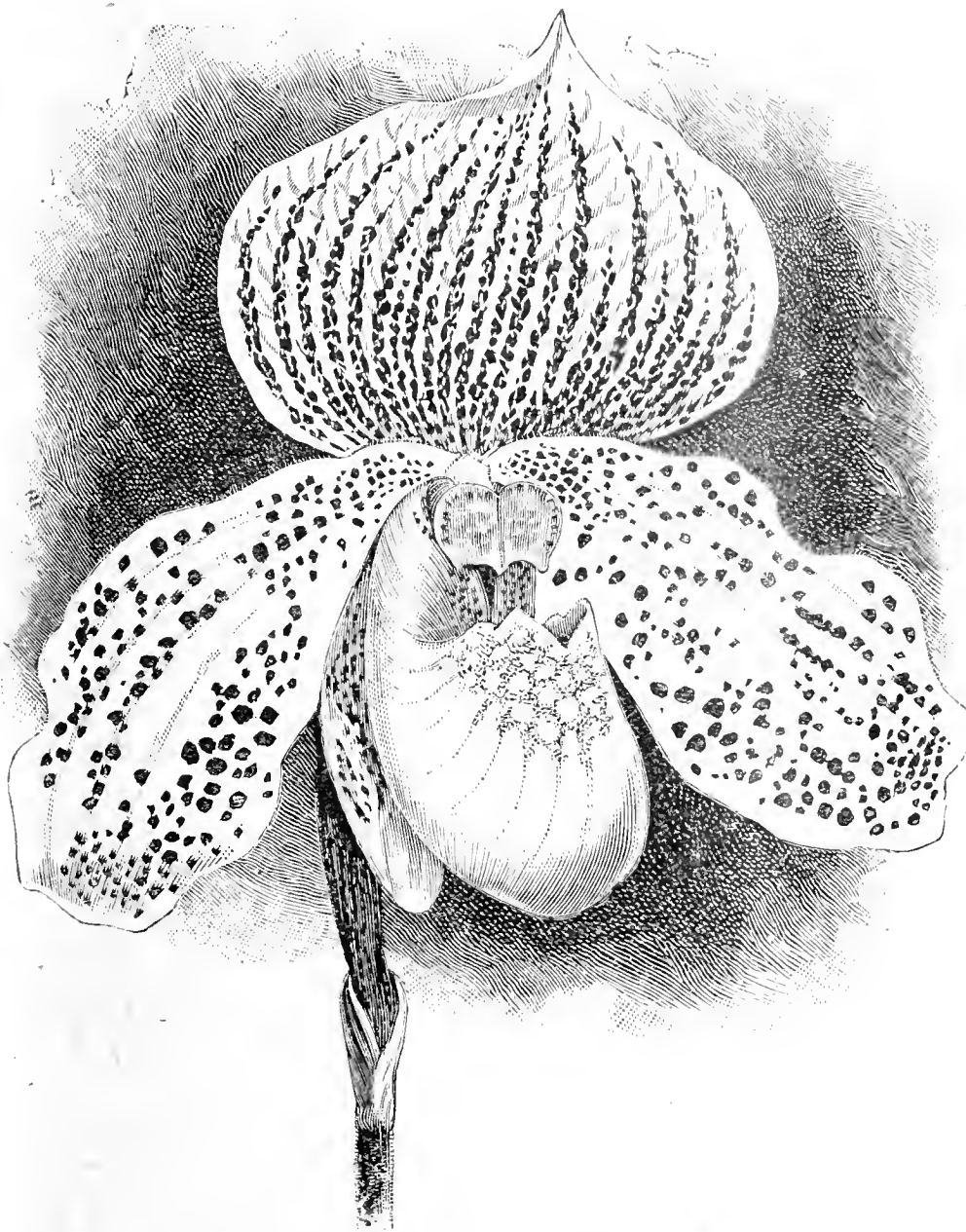
*D. dallhouseianum* is a strong vigorous growing species, often considerably over a yard in height, bearing large pale yellow blossoms with blotches of purple on the lip. Plenty of room is necessary to grow this superb plant, which is a native of Burmah, introduced in 1837. *D. Dearei* is one of the most free-flowering species in the genus, producing in great quantity its beautiful pure white blossoms, and lasting in full beauty for many weeks.

To grow it well very abundant atmospheric moisture is needed and strong heat, the plant being a native of the island of Mindanao, in the Philippines. *D. densiflorum* is a bright golden yellow flowered evergreen species of easy culture, and almost indispensable in collections.

*D. Devonianum* is one of the best of the deciduous group, having long pendant stems that in their season are wreathed from end to end with the bright showy blossoms. The sepals and petals are like those of *D. crassinode*, the lip being covered with short hairs and prettily fringed. *D. Draconis* belongs to the nigro-hirsute section, and has large ivory white flowers tinted on the lip with orange. It flowers in summer, and is also known as *D. eburneum*.

*D. Falconeri* is a very distinct plant in habit, consisting of a large number of short stems from which other stems start, making quite a dense mass of growth. The flowers are very lovely, a pure white tinged in places with rose, the petals tipped with bright amethyst purple, the lip having a rich orange blotch in the centre. It is not everywhere a success under cultivation, but usually holds out fairly well if grown in a strong and very moist heat, and induced to rest afterwards by keeping it cool and dryish at the roots. The syringe should be fairly plied about the growths in summer to keep thrips in check, these being its worst insect enemy. Shrivelling for lack of sufficient moisture in winter must never be permitted.—H. R. R.

(To be concluded.)



Cypripedium × Mrs. F. Hardy.

### The Week's Cultural Notes

There is no such thing in Orchid growing as perfect immunity from insect pests, and the most careful grower with the healthiest plant must ever be on the alert. Just now is perhaps the most suitable time of the year for a thorough look through of the plants in the Cattleya house. A good deal of the new growth is complete and getting hardened, and if there are any insects present on the plants it is this young and valuable growth that will be attacked by them during the ensuing winter. The stages, glass, and walls of the house, too, may now be cleaned with advantage, and it will be found most convenient to do this first and bring the plants back to a clean house.

A careless look at the plants to see if any insects are there is not sufficient. Every part of them must be carefully gone over, taking especial pains with the woody rhizomes and the scales about the base of the bulbs. Here scale insects of different varieties find a congenial home, and are most difficult to eradicate. First of all immerse the plants in a tub or large pail of soft tepid water, having meanwhile prepared another vessel of water with a solution of soft soap and tobacco water. When the plants have dried slightly

from the clean water dip the heads in the soapy solution, but avoid wetting the compost with this more than can be helped. They should not be stood upright after this, or the soapy water will run down into the roots, and it is very apt to cause fungoid growth there.

Lay them on their sides then to partly dry, and then with a sponge go over them leaf by leaf and stem until they are thoroughly cleansed. A bit of pointed stick should be used, to remove the insects from all parts that cannot be reached by the sponge, such for instance as the leaf axils and the under sides of the rhizome. Both the sponge and the stick are apt to puncture the leaf unless care is exercised, and although this work seems very simple, it must on no account be left to careless and inexperienced assistants, or great mischief will be done.

It is not always that a spare house is at command to put the



plants in while the house is being cleansed, but in this case the plants can, as a rule, be placed on one side while cleaning operations go on at the other. Hot lime may be brushed on the walls after these and the glass and stages have been cleaned, the lime being distasteful to insects and killing the spores of moss that usually thrive in the damp of an Orchid house. Brush it well into all the corners, both above and below the stages, and clear the latter of all rubbish and dust.—H. R. R.

#### Rare Orchids at Aberdeen.

Two very pretty Orchids were recently to be seen in Messrs. Reid and Co.'s shop window at 145, Union Street, one *Cœlogyne Dayana grande*, which is one of the rare varieties of this genus. When first flowered and exhibited by Baron Schröder in London it created some interest among Orchid growers and others interested in Orchid culture. The present plant, we believe, was a small piece imported about seven years ago, and bought at an Orchid sale in Edinburgh by Sir William Henderson, LL.D., of Devanha. Since then it has increased rapidly and now carries over 500 blooms. This plant is known as the Nicholas Orchid, and is a native of Borneo. The other variety, *Saccolabium Blumei majus*, is a very fine Orchid, a native of the Indian Islands. Mr. John Proctor, gardener at Devanha House, is to be complimented on his success in Orchid culture. "We do not think," says the "Aberdeen Free Press," "that any of these varieties have been seen in such perfect bloom in the North of Scotland before."

### Arbor Days.

If the opinion of Herr Reichert, of Berlin, is correct, that Great Britain is almost at the bottom of the return giving the proportion of forest land to the total area, viz., 11,272 square kilometres, I think it is time that public interest should be aroused in the matter of forest-tree planting. The return alluded to gives to Russia and Sweden forests equal to 42 per cent. of their area, to Austria 31, to Germany 26, to Norway and India 25, to France 16, to Portugal 5, to Great Britain and Ireland 4, and to Cape Colony 0.29. Parts of Siberia, South America, and Central Africa remain the chief sources of supply for the near future.

In France the alarm was given not long ago by M. Melard, and M. Guinier, an inspector of forests, believes that the planting of forests in France is now full of promise. England wants to save Egypt from ruin, perhaps never to leave it again; but what says another inspector of forests, M. Roger Ducamp? "If the pax Britannica in Egypt means the drying up of the Nile, such a peace is worse than anarchy"; and Lord Rosebery once said, "The Nile is Egypt, and Egypt is the Nile," whose sources are constantly decreasing in consequence of the destruction of the forests there. Without forests, little water; without water, no crops, no cattle, and rent and taxes cannot be paid.

Of course Great Britain has an insular and a moist climate (exactly what is wanted for forests), and has coal possibly sufficient for centuries, and therefore does not require firewood; but it is quite different when we have to deal with the question of timber, of which from 12 to 14 cubic feet a head are annually used, although iron is more and more taking its place in ships and house-building. Yet Dr. W. Idelich, a forest expert, in an address delivered before the Society of Arts, predicted in spite of this a positive timber famine in the near future, and concluded by saying, "That country that first engages in systematic timber cultivation on a large scale will do much to assure its own perpetuity as a nation," and, in my opinion, as a wealthy nation also. Take Palestine and Spain as instances of the gradual simultaneous decline of forests and prosperity.

Take the King of Greece and Princess Sophia, on the other hand, who on their own estates and at their own expense are planting forests, so convinced are they that the gradual deforesting of the kingdom is leading to disaster. The ratio of timber consumption in Europe is constantly increasing. It is said that Germany needs 30 cubic feet a head, and that the natural growth cannot keep pace with the demand, especially for soft woods, is shown by the news that the limit of production has been reached in Scandinavia, and that they are now awakening to the fact in Sweden, so that the school children planted last year on Arbor Day no fewer than 600,000 trees.

Canada can still export, although many districts are already depleted; but the United States—where private owners are now largely planting (and Nebraska has now a billion of forest trees growing on land which in former geographies was noted as the "Great American Desert" from their total absence)—have against this an annual consumption of 350 cubic feet a head, or 25,000,000,000 cubic feet, for fuel and lumber. The United States now use the annual growth of 1,200 million acres of woodland, whereas the total forest area is less than 500,000,000 acres, so that more than half of the annual consumption is a draft upon forest capital. Without regarding street or suburban traffic, 90,000,000 railway sleepers are annually required for renewals at 25 per cent. advance on the price of ten years ago, and 600,000 telegraph poles at 50 per cent. advance.

Mr. N. A. Eggleston, of the United States Department of Agriculture actually states, "Lumber alone would load a train of cars sufficient to encircle the earth at the Equator, and, if we add all other timber, posts and fuel, such a train would be 100,000 miles in length; or it would require 480,000 ships of 1,000 tons each to load the forest products." According to his calculations the commercial value of the forest trees of the United States is so great that it exceeds that from any other source. In 1894 the value of the cereal crops was £208,601,589, whilst that of the products of the forests for that year was £3,000,000 in excess; the value of the gold and silver raised was only one-fifteenth, and the whole value of all mineral products was only about one-half of the forest products. Such official statements are bound to arouse public attention!

Great Britain was well provided by Nature with great forests. The Druids had their fine groves of Oaks, and Queen Elizabeth was amongst the first English-speaking advocates of forestry. Comparatively few of these Oaks remain; but according to the best authorities they may live 1,500 years—only Cedar, Sequoia, and Baobab having a still longer life, while Poplars reach only 50, Elms 335, Maples 516, Birches 576, Oranges 620, Cypresses, Walnuts, and Olives 800, Planes 1,000, and Limes 1,100 years. Had former generations no duty to posterity? They had only a life estate in the forests, with no permission to waste; and as far as possible the present generation should try to rectify this great injury to the British commonwealth by planting largely. New Zealand has done this; and South Australia, at least for some time, paid a bonus for successful plantations of forest trees, and distributed them free of charge.

Cannot wealthy Great Britain follow the example of Germany in raising forest trees at cost price for municipalities, and paying a bonus of ten shillings an acre for forests planted by them, or (with some restrictions) to private persons who will do the same? There are, in fact, townships in Germany where they require no district taxation. At Freudenstadt, for instance, they have been since 1875 in the enviable position of being able to pay to each of about 1,300 burghers a sum varying from 25s. to 55s. from the profits of the forest owned by the little town. Another instance is Saaldorf, where the eighty-four ratepayers each receive every year wood and turf for burning to the value of £5, and lately the sum of £830 was divided amongst them, or nearly £10 to each, as surplus from sales of timber. This village had yet a further sum of £3,000 in hand, and, of course, no debts.

The initiation of such a system by the Government seems to me a *sine qua non* for success, at least with the smaller landholders. Even so long ago as April, 1863, the Secretary of State for India wrote to the Governor of Madras: "To forests, from their nature, the usual maxim of political economy, which leaves such undertakings to private enterprise, cannot be applied. Their vast extent, the long time that a tree takes to reach maturity, and the consequence that few persons live long enough to obtain any, and more especially the highest, returns for expenditure, even once in the course of their lives, are proofs of the necessity that forest management should be conducted on permanent principles, and not left to the negligence, avarice, or caprice of individuals, and therefore point to the State as the proper administrator, bound to take care that, in supplying the wants of the present generation, there is no reckless waste, no needless forestalling of the supply of future generations. This is matter of experience, not in India only, but in all parts of the world."—F. E. H. W. KRICHAUFF (in the "Journal of the Royal Horticultural Society.")

(To be concluded.)



#### An Early-Flowering Chrysanthemum Show.

At Bolehall House Gardens, Tamworth, on Saturday last, when a number of growers met at a friendly meeting on the invitation of Mr. W. Sydenham, cups for the following four classes were offered:—Twelve bunches early-flowering decorative Chrysanthemums, distinct; twelve bunches early-flowering Pompon Chrysanthemums, distinct; six bunches early-flowering decorative Chrysanthemums, distinct, catalogued in 1900 or since; six bunches (three yellows and three whites) distinct early-flowering decorative Chrysanthemums. All had to be grown by the exhibitor in the open, and not disbudded. An exhibitors' lunch was given at one o'clock. Mr. W. Sydenham's own Chrysanthemums, at least 3,000 plants, were available in their beds, to show habit, &c., and for reference in case of need.

#### October Flowering Chrysanthemums.

When frosts come and despoil the beauty of flowers in the open, and there is generally a scarcity of flowers in the majority of gardens, unless a speciality is made of growing in pots a good batch of Chrysanthemums which bloom somewhat early. There are now in commerce some splendid varieties for the purpose, which if grown well will give fine results. Some which I shall include in my list may, by taking the early kinds, be flowered throughout September, but all can be so managed as to bloom in October. Comtesse Foucher de Cariel (orange bronze), one of the best of that colour; Goacher's Crimson (light crimson), a great acquisition. Mdle. Marie Masse (lilac mauve).

Market White.—Few Chrysanthemums are finer, and it has proved a grand variety for flowering from the middle of September till the middle of October; the flowers are perfectly white, and are fuller than those of Madame Desgrange. The only objection I have to it is that when cut the blooms seem to fade quickly. This, however, may be because the wood is extra hard, as I have found that when the stems are cut to the soft wood the flowers last better. Matters may, however, be improved in this direction by feeding the plants liberally, as the value of Chrysanthemums often lies in the fact that they can be cut with long stems. Perhaps others will give their experience of this variety.

Parisiana.—I have this season seen a few flowers of this new introduction, and I have formed a very high opinion of it. Those who have opportunities of keeping thoroughly up-to-date should certainly try it. Ryecroft Glory, well known yet still indispensable. Sadi-Tahih-Bey (pink), good for cutting. O. J. Quintus and its white sport are good varieties to grow in quantity, so also is Lady Selborne and Yellow Lady Selborne. Mytchett Beauty is a grand yellow with stiff stems, fine for supplying pot plants or for cutting. Albert Galy (terra cotta) is one of the most pleasing of its class.—H. D.

#### A Time for Watchfulness.

A season when great watchfulness is needed has now arrived, as much damage is frequently done to unprotected plants in the open air, when sharp frosts occur during the last week in September. Some cultivators take it for granted that Chrysanthemum and similar plants are safe in the open air until the first or second week in October. In our treacherous climate it is not wise to entertain this belief, but to be prepared for emergencies not later than the present time. During ordinary seasons no harm may be done, but ever and anon those caught napping receive a severe lesson, as was the case some years ago, when thousands of Chrysanthemums in pots were utterly ruined.

In some private gardens, where the Chrysanthemum quarters are surrounded by walls or buildings, or partially protected in a similar way, the plants escape when those grown in open positions in the same garden are ruined unless protected. Position, therefore, needs to be taken into consideration. It seems quite probable that sharp frosts may occur suddenly this year, as the temperature of the ground is already unduly cold, owing to the wet, sunless season, and I have often noticed that after such seasons real autumn weather comes very suddenly. I do not advise gardeners to rush their plants under cover at once, because I know full well the advantage of leaving them in the open air as long as possible provided the buds have not begun to burst, as the practice not only tends to prolong the display, but also to keep the plants sturdy, and the flower stems stiff.

When, however, the buds are swelling, a slight amount of frost injures them and prevents the petals from unfolding satisfactorily, even if the buds continue to swell. Such plants should be placed under glass at once, or be protected at night by canvas

or other suitable material. As far as possible houses should be got in readiness, so that when danger threatens many plants can be housed quickly. We always get some warning. I have never known Chrysanthemums badly injured by an isolated night's frost. When, however, we get five or six degrees in one night it is necessary "to look out," as the following one may prove ruinous.

Good measures to take at such times are the following:—Place under glass, temporarily, in a building all plants well advanced. Others, which must be left in the open air, should be removed to sheltered position, where, if possible, some kind of framework can be placed over them, and covered with mats or canvas. Even this cannot always be done where there are hundreds of plants to be dealt with. A good plan, then, is to get a heap of dry straw or bracken in readiness under cover and watch the weather closely. If at any time during the evening there is the slightest doubt as to whether or not the frost will be severe enough to injure the plants, be on the safe side, turn the pots down on their sides, and cover pot and growth with the material in readiness.

The shoots of Chrysanthemums are this year far from ripe, and special attention will be needed to prevent injury by frost. The above are measures which I have often successfully adopted, and by doing so have saved hundreds of valuable plants, when many others in the same district have been ruined. That is why I have penned this note, as I think it is not always the man who writes in the most fluent style who does the most good, but rather he who hits the right nail on the head at the right time. The motto from the present time onward should be watchfulness.—CHRYSANTHEMUM GROWER.

## The Fern Mite.

In the Journal for September 4, under the heading "The Destruction of Unhealthy Plants," readers are asked to give their experience with certain pests infesting Ferns, i.e., *Macrobiotus Hufelandi* and *Oribata demersa*. From lack of knowledge as to the identity of the pests named, I do not know whether I am right in assuming either of them to be identical with a very small pest we call "Fern mite," and one which has been most destructive in many establishments at Edmonton in North London, during the past year or so, particularly among the general market species and varieties of *Pteris*. The first indication of their presence is a rusty and disfigured appearance of the young fronds, as they are throwing up, and in a comparatively short time—only a few days in many cases—the plants present such a crippled and unsightly appearance that they are absolutely of no use for the purpose they are grown.

At first we were at a loss to account for this unnatural appearance of the plants, and as your correspondent suggests, the man in charge was suspected of being neglectful and careless in his watering, but afterwards, when whole batches of plants were thus affected, we found them—on examination with a pocket lens—to be infested with a small mite similar to red spider, though much smaller; and more recently, with the aid of a small microscope, I have been able to examine them more closely. With but a limited knowledge of the subject and the life history of the pest, I cannot offer an opinion as to its exact identity, but should be pleased if your correspondent could give us a fuller account of his observations and experience, and also if he can suggest any preventive measures or efficacious remedy whereby they can be destroyed without injury to the plants.

My own experience so far, is that the furnace is the best place to destroy them so soon as their presence is detected. When one has several thousand plants thus affected, it means, however, a serious loss to dispose of them in such a manner, especially after growing them for seven or eight months, and in a few weeks expecting to get sixpence each for them. I may say that we have tried dipping the plants and syringing them with many insecticides and concoctions, all with very little effect, and have also placed individual mites in a small cavity on a piece of glass into which a drop of the various solutions has been placed, and watched them through the microscope struggling to free themselves, and eventually crawl away little worse for the bath.

Aridity of the atmosphere is said to be the cause of their appearance, but I have syringed and damped the plants overhead daily, maintaining the atmosphere almost at saturation point continuously from the time of potting up, without any appreciable effect upon the "mite," and I know, sir, there are many growers besides myself who will feel very grateful for any hints that expert or scientific opinion can give, that will enable us to combat successfully with this pest, and thus confer that benefit upon employer and cultivator which Mr. Ollerhead so aptly concludes would result in public good. What a vast field for knowledge and research in this direction there is for the cultivator of plants; but, alas! £1 a week is hardly likely to induce or permit of an investment in microscope, nor many microscopic works.—TREM.





### Hybrid Perpetual Roses.

The rather cold and wet season has been favourable to the growth and flowering of Hybrid Perpetual Roses in the north of England. In this garden they have not flowered so freely, or produced such fine blooms, for several years. The same result has been noticed in other gardens, and two large growers recently informed me that their H.P.'s had done splendidly, but just the reverse with the Tea Roses. The flowering season has been quite a fortnight later than it usually is. The weather at that time being cool, with not much sun or rain, the blooms remained a long time in good condition, keeping the colours so well.

Strange to say, that while so many fruit and other trees have been so badly infested with aphides and other pest, our Roses have not been so clean for a long time. They are in rather a sheltered position, and this may have had something to do with it. Spraying with quassia extract periodically will generally keep them clean, but this season only one application has been found necessary, early in the season. The maggot, too, which so sadly disfigures the "Queen of Flowers" very often, has not been so prevalent this season. The bulk of our Hybrid Perpetuals are arranged on a border one hundred yards long. They are planted in groups, one variety only in each group. By this method of planting the characters of each variety may be better noticed, as well as the colour and form of the flowers.

Nearly all Roses in this section have done well. I should like, however, to mention a few varieties that have been particularly good. Mrs. John Laing, which is always good, has excelled itself, producing some really beautiful blooms of fine form. Amongst Hybrid Perpetuals this is my favourite Rose, which is the reason of it coming first in the list. Writing recently in the Journal on Roses for cutting, "H. D." puts this Rose first on his list, so perhaps he may consider it the best for that purpose. In Messrs. B. R. Cant and Sons' catalogue is the following description: "Soft pink colour, very large and fine form, a good grower and abundant bloomer, quite one of the very best varieties for all purposes, and cannot be too highly recommended."

Violet Bouyer is a Rose that I have not had a very good opinion of until this year. There is not much substance in the blooms, and they are so much affected by the weather. This year it has given some very chaste blooms of good shape. The strong growing Margaret Dickson has kept up its reputation by producing fine blooms. This Rose, like the Marchioness of Londonderry, is somewhat formal in its growth. The latter, by the way, does not do very well here, it makes good growth, but nearly all the buds are deformed.

Another white variety that must not be omitted is Merveille de Lyon, which has given very large blooms of good form. Suzanne Marie Rodocanachi, a Rose always worth growing, if only for its very distinct colour, rosy cerise, has done better than usually, although it is always a beautiful Rose, and is very pretty in the bud stages.

Général Jacqueminot one of our oldest Roses, but still a general favourite on account of its bright colour and fragrance. This Rose always blooms well, but this year has produced large masses of flowers, weighing the growths down to the ground. In Ulrich Brunner we have a Rose perhaps nearly as well known as the "Général." The blooms are of quite a different type; the growth, which is always strong and clean, are stronger than usual; but there has not been such a marked difference in the blooming as there has been with many other varieties. These two Roses are amongst the most consistent varieties, nearly always doing well.

Louise van Houtte, a very dark coloured Rose, which does not do very well here, has both grown better and given some fine large blooms of beautiful form. Indeed it has done better this year than I ever remember seeing it before. The same may be said of François Michelon, which has flowered profusely, some of the blooms being very large and double,

and beautiful shape. Alfred Colomb should have been included with Général Jacqueminot and Ulrich Brunner for its consistent character. A strong grower, free blooming, and never hardly failing, but is better than usual this year.

In Pride of Waltham we have a Rose with a distinct colour, rather a bright flesh colour. Its habit is very like Suzanne Marie Rodocanachi, and, like this Rose, is very pretty in the bud. The blooms this year have been deeper coloured than they usually are, owing perhaps to the dull weather experienced at the time they were in bloom. Fisher Holmes is a good Rose for massing. It produced a large quantity of flowers, but it is not of a very pleasing colour, and the blooms are rather wanting in substance. Etienne Levet has done much better here this year than it usually does. Marie Baumann, a Rose of beautiful form, is rather difficult to grow well; but has flowered well this season, some of the blooms being almost perfect. A weak point in this Rose is its slender stems, so that the blooms hang down, and cannot be seen to the best advantage.

I should like to include two other varieties, both rather old ones. Charles Lefebvre, too well known to need any description; not one of the best of growers, but the blooms have been especially good this year. The same may be said of the Duke of Edinburgh, another well-known Rose. It may be as well to say that the Roses are allowed to grow naturally, and very little, if any, disbudding is practised. —J. S. U.

### The Farquhar Rose.

This Rose is a perfect rose colour, but at the Rose Conference period it was this innocent subject which somehow or other gave rise to the story of a blue Rose. Our contemporary, "American Gardening," publishes what it terms "the real facts of the case," and ends by saying: "We commend this information to our English horticultural friends." If the writer of that note in "American Gardening" will turn to our issue for July 3, he will there find "the real facts of the case" in print, nearly two months before they appeared in our transatlantic contemporary.

### The Eternal Crimson Rambler.

"Can you recommend me a good climbing crimson Rose?—now I don't want Crimson Rambler." How many times I have been thus confronted at the shows during the past season, I would not like to say. Failure with this beautiful Japanese Rose is not confined to one district. Two of the chief causes of failure are planting against a wall, or in a confined place, both of which this giant resists. But we want Rambler Roses on walls, and sometimes in confined places too. Now, in "Rubin," a new competitor of the Rambler type, we have a good Rose. It is a good, vigorous grower, not subject to red spider, with deep green foliage and somewhat larger flowers than Crimson Rambler, produced in looser panicles. I have no hesitation in advising those who cannot grow Crimson Rambler to try Rubin, and to those who do grow Crimson Rambler—well, try Rubin also.—E. J. LOVE.

### New Roses from Waltham.

Among the new varieties of Roses sent out by Messrs. William Paul and Son, of Waltham Cross, Herts, are the following:—

Waltham Rambler, a hardy and robust climber, having large panicles of rosy-pink single flowers. It resembles Leuchtstern, but differs in having a much more vigorous habit.

Corallina, now becoming quite well known, though only seen for the first time in 1899. The flowers are deep rosy crimson, shaded with coral-red. It is specially good in the bud state. It is a very distinct variety, a good autumnal, and handsome for massed effect in beds.

Sulphurea is an excellent new yellow bedder, of vigorous growth, and has glossy dark foliage, so that mildew never settles upon either leaves or stem. The crimson-brown shoots contrast beautifully with the profusely borne sulphur-yellow flowers. It is quite hardy, and a fine yellow bedding or massing Rose, and is said to be very fine for pot culture and forcing. An Award of Merit was accorded by the Royal Horticultural Society to it, on September 23. We are indebted to the raisers, Messrs. W. Paul and Son, for the use of the illustration.

Each of the foregoing are novelties of last year or the year previous, but amongst the new bedding and decorative Tea Roses for 1902, there are Chameleon, whose rosy flesh-coloured blooms were quite an attraction on Messrs. W. Paul and Son's stand at the latest Drill Hall meeting. Fairy Queen, with fawn hued blossoms, we have occasionally noted during the past season; and reference has also been made to the new Salmonea and Morning Glow, the former having flowers of a bright rosy crimson suffused with orange and fawn, and the latter a deep bright crimson with light salmon centre. The new Rose catalogue of the firm, just published, should be consulted by those who are growers of Roses, and who would keep up with the advances that are being made.

## Pollination in Orchards.

It has been frequently noticed that in large plantations of one particular variety of Apple or Pear the quantity of fruit produced greatly diminishes from the outside of the plantation towards its centre, and the explanation apparently is that foreign pollen, that is, pollen from another variety of Apple or Pear, as the case may be, is necessary for the proper fertilisation of the ovules, in order that fruit may be set at all. It seems also that incomplete fertilisation may also take place, owing possibly to weakness in the pollen of the particular variety, resulting in the formation of misshapen or malformed fruit.

The fertilisation of the ovules depends chiefly upon three factors:—

1. The occurrence of suitable weather conditions at the time of the receptivity of the stigma and the ripening of the pollen.

2. In the case of self-sterile varieties, the presence of bees or other insects to carry pollen from one flower to another. Müller gives a list of nine bees visiting flowers of Apple (*Bombus hortorum*, L. ♀ being especially abundant), as well as other insects (seven) visiting the flower for honey or pollen; and a list of six bees (*Apis mellifica*, L. ♀ very abundant), as well as twenty-four other insects visiting the flowers of Pear ("Fert. of Flowers," pp. 238, 239). He also says that if bees fail to visit the flowers, self-fertilisation occurs in each case, but he is presumably speaking of the wild plants, *Pyrus Malus*, L., and *P. communis*, L., and not of a garden variety.

3. In the case of the self-sterile varieties, the presence of plants in the near neighbourhood whose pollen will fertilise the ovules of the self-sterile variety.

This last factor is the one most under the control of the grower, and therefore the one upon which definite knowledge is essential, and though much has been done in America in finding out which are the self-sterile varieties, &c., very few definite experiments carried out on lines which admit of a minimum of error in the result appear to have been conducted, or at least recorded, in this country. American results are not altogether reliable here, owing (1) to the difference in the varieties grown, and (2) the difference in the meteorological conditions.

In an attempt this season to ascertain which varieties of Pears were self-sterile, and therefore not suitable for large plantings by themselves, I tested the following fifteen varieties:—*Bellissime d'Hiver*, *Beurré d'Amanlis*, *Beurré Superfin*, *Catillac*, *Conference*, *Doyenné du Comice*, *Durondeau*, *Easter Beurré*, *Emile d'Heyst*, *Jargonelle*, *Josephine de Malines*, *Louise Bonne of Jersey*, *Pitmaston Duchess*, *Williams' Bon Chrétien*, *Olivier de Serres*. Of these only two, *Conference* and *Durondeau*, set fruit under such conditions that foreign pollen (i.e., pollen of some other var.) was unable to obtain access to the stigmas—i.e., only those two vars. proved self-fertile.

So far the evidence is positive; the evidence with regard to the other thirteen varieties is not conclusive, the weather prevailing at the time possibly interfering with the setting of the fruit. Negative evidence can only be accepted in such cases after a long series of experiments extending over several years with varying climatic conditions. In some cases, although the trees flowered very well, and were growing close to other varieties, only one or two fruits were set, showing that weather conditions interfered greatly with the production of fruit.

Thirteen varieties of Apples were experimented on—*Beauty of Kent*, *Cellini Pippin*, *Cox's Orange*, *Claygate Pearmain*, *Gladstone*, *Lord Derby*, *Lady Sudeley*, *Mannington Pearmain*, *Northern Greening*, *Schoolmaster*, *Stirling Castle*, *Sandringham*, *Sturmer Pippin*, and here again only two varieties set fruit, under conditions precluding the entrance of foreign pollen—*Gladstone* and *Stirling Castle*. Of course, here again, the negative evidence does not conclusively prove that the remaining eleven varieties were self-sterile.

The weather prevailing at the time, high winds and wet, prevented any cross pollination experiments being carried out with accuracy; but it is worth noting that, although the Pear-blossoms are, as a rule, at least, protogynous, yet it frequently happens that one or two of the anthers have shed their pollen before the bud opens; this fact points to the necessity for special care in the choice of flowers for cross pollination.—F. J. C.—(R.H.S. Scientific Committee).

## Town Trees.

(Concluded from page 282.)

### The Acer Tribe.

Like the common Ash, the Mock Plane, or Sycamore (*Acer pseudo-Platanus*), finds way as seeds into backyards, areas, and other confined places in country, and sometimes the sunniest and confined towns, and seedlings spring up with astounding vigour. They are cherished in the small front or back garden or yard, for who does not love the green thing that has sought refuge and appeals for protection? The seedlings grow might and main, embellish the situation, and help purify the atmosphere. Anon they afford shade, become part of the very life of the occupier of the place. If space forbids, the heads are lopped or cropped, always in winter time, and they remain quite satisfactory for a lifetime. Where there be room the young trees mount up quickly to the height of the first floor windows, or even eaves and ridges of two-storied dwellings, when, and sometimes long before, they contract fly (*Aphis aceris*), which strew the ground beneath with honeydew, and the upper surface of the leaves become coated therewith; then this turns black by action of fungus, the leaves being very unsightly, and, worst of all, they curl up, mature, and fall off early, as this season, in September. Black blotch fungus (*Rhytisma acerinum*) also affects the leaves seriously in some seasons, even this, and they fall early in consequence. For these reasons I do not see the merits of Sycamore trees for town planting. The bees are fond of the flowers and their hum may be pleasant to town dwellers; but this is bad when the



Rose, *sulphurea*.

(See reference on page 308)



trees, in my experience, are altogether unfit for place in the smokiest towns. The variegated variety (*A. P. albo-variegata*) holds its own better against smoke and impure air than the green-leaved, and the purple-leaved (*A. P. purpureum*) is not troubled nearly as badly with aphides and black blotch fungus as the type.

The Norway Maple (*A. platanoides*) grows grandly when young, its smooth Plane-like leaves resisting smoky and fume influences well, especially in exposed situations; but when getting at all aged the heat and drought appear too much for it, so that the leaves come littering down far too early in September, especially in a dry and hot season, even in country towns. Similar remark applies to the variegated forms. One of the finest foliaged Norway Maples is Schwedle's (*A. p. Schwedleri*), with deep bronzy-red leaves, very large, the tree being a vigorous grower and most effective.

Different altogether is the large-leaved Maple (*A. macrophyllum*), with its digitately five-palmate, roundish recessed and somewhat three-lobed leaves; not over-hardy perhaps, but enough so for southern and midland counties towns, if not northern, the foliage holding on as persistently as the Planes. The specimens observed have had the advantage of a generous soil, but not better than for the other Maples alluded to, including the Sycamore.

#### Negundo and White Beam.

The Ash-leaved or Maple-like Box Elder (*Negundo aceroides*) forms a spreading tree, grows fast, and is very ornamental. It bears smoke and impure air well, but reflected heat combined with droughty conditions are too much for its powers of resistance, hence begins to litter in August and keeps on right away until frost ends the foliage on the latest growth. The variegated form (*N. a. variegatum*), so much in vogue for suburban planting, is not nearly as hardy, and does not grow so freely as the type after the flush of youth is past, and in not a few cases gets "smaller by degrees and beautifully less," some being leafless at the beginning of September.

The White Beam tree (*Pyrus Aria*) grows luxuriously in confined spaces, always provided there be moisture in the soil, for on a gravelly soil the leaves were curled up and many fallen, even some trees leafless, at the beginning of September. As a small tree it deserves notice from planters, but hardly for streets, as its numerous brightly-tinted berries, however handsome on the trees, are a great nuisance in footways. Similar remark applies to other species of *Pyrus*, and many of them begin littering too early in autumn by their leaves, and the fruits or berries make a mess later on; hence they, with the Thorns, will be passed in this connection; also low trees or shrubs.

#### Oaks in Variety.

Great Britain's predominating tree, the British Oak (*Quercus Robur*), occasionally springs up in backyards and front gardens of town residences, and the seedlings are very healthy and vigorous for a time; but, like the seedling Ash and Sycamore before alluded to, their enemies find them out when 20ft high or before, and they assume an ill-thriven appearance. This year some trees have the lower surface of the leaves almost entirely covered and weighted down by button galls, covered by the insect named *Neuroterus numismatis*. The trees are very unsightly, and the "buttons" in early autumn make a great mess. The sub-species or forms of common Oak, *Q. pedunculata* and *sessiliflora*, are not a whit better, though the latter is rather less affected.

In contrast with the British Oak, the Turkey Oak (*Q. cerris*) has splendid leafage, and the Hungarian Oak (*Q. conferta*) quite equals or rivals it. I cannot say that I am in love with the sometimes almost evergreen forms, the Lucombe and Fulham, but the scarlet Oak (*Q. coccinea*) has not only charms in summer by bright green shining foliage, while in autumn the leaves turn red. Against Oaks in streets there is the objection of acorns, and also that of growing too large and being worse than spoiled by lopping. Pollarding is an altogether different affair, and this practised betimes results in heads which for beauty are matchless.

#### The Walnuts.

The Walnut (*Juglans regia*) has kept its leaves singularly well, but the husks and nuts are against it as a street tree. It also is not hardy enough for northerly and high situations. The black Walnut (*J. nigra*) is a noble tree for towns, though on account of its fruits not commendable for streets.

The much-lauded Black Italian Poplar (*Populus monilifera*) is much affected by rust fungus (*Melampheora populina*), and shedding its leaves wholesale. It has also the defect of losing some of its branches by attacks of a fungus (*Didymosphaeria populina*), and though very bold and deep green in foliage, is not nearly as free-growing and far from as healthy as some other species and varieties which must stand over for consideration with what may be termed the "cream" of trees for town streets.—G. A.

## Victorian Medallists of Honour in Horticulture.

### MR. JOHN T. BENNETT-POË, M.A., V.M.H., &c.

Recently the Council of the Royal Horticultural Society bestowed a Victoria Medal of Honour on Mr. Bennett-Poë, in recognition of his good work in horticulture, and among the flowers. The sixty-first volume of "The Garden" was dedicated to Mr. Bennett-Poë on June 28th of the present year, and from that number we have extracted the following biographical notes.

"Born in County Tipperary, in the year 1846, Mr. Bennett-Poë received his earlier education from tutors at home and at a private school; afterwards at Trinity College, Dublin, there graduating successively B.A. and M.A. He was almost a born gardener, inheriting a love of plants, which became and has continued to be the greatest of his life's interests. Never very robust in health, the open air life of a practical horticulturist has been of great benefit, and has enabled him to acquire a knowledge of plants and of their ways and treatment that is probably surpassed by that of few other living amateurs.

"On settling in London in 1889 Mr. Bennett-Poë was pressed into the active service of the Royal Horticultural Society on the Floral Committee and on the Board of the Chiswick Gardens; serving also for ten years on the Council, for some time as Vice-President. Among his other offices in connection with the Society, he is a Trustee of the Lindley Library, Trustee of the Veitch Memorial, and was formerly Chairman of the Narcissus Committee.

"Mr. Bennett-Poë's services have also been given as judge at the shows of the Royal Horticultural and Royal Botanic Societies, and in the same capacity at shows at Dublin, Cork, and Scarborough. His exhibits of rare and beautiful plants have received many honours, and he is well known as a prizewinning exhibitor of Narcissi, Tulips, Auriculas, and Orchids."

### MR. WILLIAM BATESON, M.A., F.R.S., V.M.H.

Though we are unable to present Mr. Bateson's portrait with the following notes, yet these may be read with interest at this time when considerable attention is being devoted to the problems of heredity in plants and animals. Mr. William Bateson is the chief exponent and most active experimentalist in this country in all that purports to variation, heredity, selection, and other phenomena connected with the evolution of plants and animals. In the Natural History Museum at South Kensington, there is now on view, in the case devoted to objects connected with the most recent research, a practical demonstration of the results of cross-breeding Peas (*Pisum*), which is specially elucidatory of Mendel's law. This exhibit is presented by Mr. Bateson.

In his introductory note to the translation of Gregor Mendel's paper on "Experiments in Plant Hybridisation," published in the Journal of the Royal Horticultural Society, vol. xxvi, 1901, part i., Mr. Bateson writes that:—"The conclusion which stands out as the chief result of Mendel's admirable experiment is, of course, the proof that in respect of certain pairs of differentiating characters, the germ cells of a hybrid, or cross-bred, are *pure*, being carriers and transmitters of either the one character or the other, not both. In so far as Mendel's law applies, therefore, the conclusion is forced upon us that a living organism is a complex of characters, of which some, at least, are dissociable and are capable of being replaced by others. We thus reach the conception of *unit characters* which may be rearranged in the formation of the reproductive cells."

It is in order to test to what extent Mendel's conclusions are found to apply to other characters, and to other plants and animals, that Mr. Bateson has undertaken the experimental work he is now engaged with. Until recently, his studies have been most zoological. His chief contribution to inquiries on the problem of Evolution, was a book published in 1894, under the title "Materials for the Study of Evolution," dealing mostly with zoological subjects.

Some years ago Mr. Bateson began a series of breeding experiments on variation and heredity in animals, using especially poultry and butterflies; and in several species of plants, as for instance *Pisum*, already mentioned. An account of the results thus obtained will shortly be published. In this experimental work, Mr. Bateson has been associated with Miss E. R. Saunders, lecturer on botany at Newnham College, Cambridge.

As secretary of the Evolution Committee of the Royal Society, the subject of these notes has further been endeavouring to promote inquiries of this nature, and to assist in the scientific utilisation of the results obtained by practical men. Breeders and horticulturists are continually engaged in experiments on a large scale, many of which, if recorded in detail, would have a high scientific value.

A sub-committee has been appointed to confer with the Royal



John T. Bennett-Poë, M.A., V.M.H.

Horticultural Society, and to further the objects of the committee so far as horticultural investigation is concerned. It is hoped that some of those who are engaged in practical horticulture may be willing to assist the committee by communicating the results obtained. So far, only a very small beginning has been made. Observations, to be useful, have to be detailed and drawn up on a statistical scale.

Mr. Bateson is a member of the Councils of the Royal Society, and of the Zoological Society. The Royal Horticultural Society lately bestowed on him the blue ribbon of horticulture—The Victoria Medal of Honour. Mr. Bateson is a tall and well-proportioned gentleman, of prepossessing appearance, and endowed with much energy and force of character. He is in the prime of life, and may look forward to very many years of good and useful work, in which we trust that success may attend him, and that many advances may be made.

#### MR. GEORGE MASSEE, V.M.H., F.L.S., &c.

It is our privilege to introduce to the readers of The Journal, a personality to whom gardeners and agriculturists owe a great debt of gratitude, and not only does this apply to practitioners at home, it bears quite as much on producers abroad and in the tropics. Mr. George Massee is in the front rank of living micologists and bacteriologists, and in his illimitable sphere of research, he is convincingly a zealous worker. The meanest fungus is to him possibly more interesting than the loveliest Orchid or the most graceful Briar.

Mr. Massee's first botanical work was plant-collecting in Ecuador and Peru, of which dry countries Charles Darwin writes so interestingly in his "Voyage of a Naturalist." On returning to England, Mr. Massee occupied the position of lecturer on botany to the London University Extension Society, which office he held for some years. He later accepted the newly-created post of principal assistant of Cryptogams in the Herbarium, at the Royal Gardens, Kew. Here he has remained, and the greater portion of his time is occupied in investigating the plant diseases from British and Colonial sources. Quite recently the plant diseases caused by vegetable parasites submitted to the Department of the Board of Agriculture, are sent to Kew for investigation.

Mr. Massee has delivered lectures on phytopathology to the students in the Royal Horticultural Society's gardens at Chiswick and at Kew. He is exceedingly interesting in this rôle, and imparts his knowledge in a lucid manner, which is characterised by an ever-present accompaniment of quiet humour. His "Text Book of Plant Diseases Caused by Cryptogamic Parasites"

published in 1899, is a useful book, and one which every gardener ought to possess and study. Mr. Massee's latest work is one which must have necessitated immense care and patience, as well as wide knowledge and experience of fungi. It is no less than a descriptive list of the Agarics of European countries. The title is "European Fungus Flora: Agaricaceæ." The chief other works of which he is author are "British Fungi," "British Fungus-Flora," and "A Monograph of the Myxogastres." He is president of the Quekett Microscopical Club; chairman of the micological section of the Yorkshire Naturalists' Union; member of the Scottish Cryptogamic Society; member of the New Zealand Institute, and other naturalists' clubs and societies.

The Royal Horticultural Society, through its Council, have recognised the usefulness of the work being done by awarding to Mr. Massee their Victoria Medal of Honour in horticulture.

## Irish Notes.

### The Irish Forestry Excursion.

The first annual excursion of the above society took place in fine weather, at Emo Park, Portarlinton, the ancestral home of the Earls of Portarlinton, within comparatively easy reach of Dublin.

Amongst the company were Dr. Cooper (founder and president), from London, also Mr. Munford, Mr. Galvin, Mount Talbot, Roscommon; Mr. J. Jones, Delgany; Mr. Melville, superintendent, Finsbury Park, London; Mr. Hodson, Mr. J. Carew, Mr. S. Brown, chairman County Council, Naas; Mr. Dick (late of Phoenix Park), who performed the arduous and thankless task of guide; Mr. F. W. Burbidge (curator Trinity College Botanic Gardens), Mr. R. Anderson (superintendent Phoenix Park), Mr. Gallagher (Editor "Farmers' Gazette"), Mr. Fraser, and in the absence of the secretary, Mr. Geoghegan made an excellent eicerone. The first wood entered was locally known as Spire Wood, and largely planted was the well-known Scotch Fir (*Pinus sylvestris*). The finest specimen 4ft from the ground measured 8ft 10in and about 18ft of clear stem before the first fork; the trees were in good condition, the bark free from injury. Some Silver Firs were to be seen, but they evidently did not thrive. Before emerging from this wood there was an enormous amount of under-wood that impeded walking, and suggested a retrograde management in this plantation, whilst the ground was studded with self-sown seedlings of Beech and Scots Fir.

The next visit was to the domain proper. The avenue leading to the gates was approached by rows of Linden trees (*Tilia*



George Massee, V.M.H., F.L.S.



europæa), and were received by the gardener, Mr. Bradbrooke, who kindly pointed out the leading features. Though the domain was densely packed with trees of various kinds, the broad fact to be gleaned was, that the planting was more ornamental than productive. The one pleasant feeling aroused by visiting the woods was the general absence of fungus or insect attack; the Larch plantations besides being fine timber were completely free from blister or *Peziza Wilkommii*, though fairly prevalent in Ireland, and in some quarters renders Larch production an almost impossible task. Though the area covered was fairly large, and though an enjoyable day was spent, yet one must advert to the many good lessons wanting, and which one may hope to glean on future occasions. At all events the Society could see the great defect in Irish forestry, namely, the want of proper forest management, and they should do their utmost to force conviction on those who guard the last vestiges of our national forests, and enable our newer plantations to be placed on a proper footing. Subsequently the party were photographed on the lawn, and drove to the "Imperial Hotel," where dinner was served in excellent style. The chair was taken by Dr. Cooper, and afterwards, several toasts having been proposed and duly replied to, a warm vote of thanks was passed to the Countess of Portarlington for her kindness in placing the woods at the disposal of the society. The party shortly afterwards returned to town, after a very enjoyable outing.

#### The Irish Fruit Conference.

The Irish Board of Agriculture have recently announced to hold a fruit conference in connection with the Cork Exhibition, on October 15 to 17. The schedule states that papers will be read by experts, but the general tone of the topics is not even hinted at. It is very questionable whether this notice is adequate enough to make the conference representative, and it would seem that the object was more to supply an attraction to the exhibition than to deal seriously with the general question of fruit growing. But a fruit conference is eminently required, as several topics require to be decided for the guidance of those intending to grow fruit, namely the best varieties for each county, the kind of soil in which they do best, and the varieties that require a special compost to grow them, for example, the well-known Bramley's Seedling will not do in some parts of County Wicklow without a specially prepared soil. Growers want to know what varieties will do generally in Ireland, and which are suitable for particular soils. The varieties given should likewise be representative of a good succession, and yield a good supply of fruit well into the winter. Growers also wish to know the best modes of keeping fruit in cool houses, of the erection of houses, and internal structure of same. When, however, we turn to the schedule, such a scheme is not covered, but we find merely prizes given for a series of dishes of each kind of fruit. Now, such awards would only bring this display to the level of a local country show, and reveals the fact that the organisers did not grasp the meaning of a conference, otherwise they would have taken the necessary steps to bring a large array of growers together by means of the local horticultural societies. Growers are not going to expense of travelling to Cork and staying there for the best part of a week, without the guarantee of something in the nature of a conference. The schedule ought to say a fruit display.—A. E. O'NEILL.

### CUCUMBERS.

The plants for winter fruiting must be in their places by the middle of October to insure a good supply at Christmas and onwards. Keep them near the glass to ensure a sturdy growth, not allowing them to become root-bound. See that the fermenting material is in a due state of preparation if any had to be employed for bottom heat, and make certain of the heating apparatus being in proper order. A bottom heat of 85deg to 90deg will be safe, but the latter temperature should not be exceeded; if from hot-water pipes a bottom heat of 80deg to 85deg is sufficient.

As there are many failures with winter Cucumbers through disease, it will be necessary to take proper precautions in the way of thorough cleanliness and choice of soil. Turfy loam of a light nature is best, but about 3in thick or less with the turf, and this baked in an oven, or on an iron plate over an improvised furnace formed of loose bricks, being careful not to bake it to a cinder, but only to destroy fungoid germs and nematoid worms, a temperature of 212deg being sufficient.

The eelworms are generally located in the decayed parts of the herbage, and that part should be placed on the hot plate, and when heated through so that the hand cannot be held on the soil side it is cooked enough. This will not injure the compost in the least, while it will certainly kill eelworms, and though somewhat troublesome, is far the best of preventives, as acids render the soil more or less sterile for a time, and mineral salts have a tendency to induce grossness in the plants, especially those of a retrograde nature.—A.

## NOTES

## NOTICES

#### New Park for Willesden.

To provide another open space for the public, the Willesden (London) District Council has acquired some acres of land at Stonebridge Park, a portion of the parish now being rapidly developed by residential dwellings. This new recreation ground will be opened on Saturday, October 4.

#### York Chrysanthemum Show.

This important fixture takes place on November 12 and the two following days. Numerous pieces of plate and valuable money prizes are being offered for plants, flowers, fruits, and vegetables. Entries close on November 5, and communication should be made for answers to inquiries to the secretary, Mr. Geo. F. W. Oman, 38, Petergate, York.

#### A New Calla.

A Blankenbourg (Germany) horticulturist reports to a French gardening paper that he has presented before the Royal Horticultural Society of Prussia, a new Calla, or correctly, *Richardia*—a cross between *R. Elliottiana* and *R. Adami*. The spathe is citron yellow, with a purple shaded base, and the foliage possesses transparent spots. It is hardier than *C. Elliottiana*, and is to be placed in commerce under the name of *R. Solfaterre*.

#### Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, October 7, in the Drill Hall, Buckingham Gate, Westminster, 1-5 p.m. A lecture on "Experiments with Chemical and other Manures" will be given by Mr. F. W. E. Shrivell, at 3 o'clock. At a general meeting of the Royal Horticultural Society held on Tuesday, September 23, thirty-six new Fellows were elected, making a total of 934 elected since the beginning of the present year.

#### National Dahlia Society.

Arrangements are being made for the holding of a Conference on the judging of Cactus Dahlias in September, 1903, on the afternoon of the first day of the annual exhibition. The Conference will be opened by a paper from Mr. C. G. Wyatt. The exhibition will be held at the Drill Hall, Buckingham Gate, the arrangements being similar to those for the exhibition held recently, and the Conference will take the place of the fortnightly lecture of the Royal Horticultural Society. Several new decorative classes will be added to the schedule for next year.

#### The Year's Weather.

The Meteorological Department at Greenwich Observatory announces that the rainfall for the first eight months of the year was 1.786in below the average. Of sunshine during the eight months there has been a falling off of 313.8 hours, or about an hour and a quarter each day compared with the same period last year. The record of temperature does not show the summer months in any better light. The mean for the eight months is 49.3deg, which is 1.1deg below the average. One may well agree with the general verdict upon the year's weather to date:—Rainfall, below the average; great fall in sunshine; very cloudy summer; a cloudy year.

#### Examination in Horticulture, 1903.

The Royal Horticultural Society will hold its annual examination in the principles and practice of horticulture on Wednesday, April 22, 1903. The examination will be held simultaneously in as many different centres in Great Britain and Ireland as circumstances may demand. A centre can be established wherever a magistrate, clergyman, schoolmaster or other responsible person accustomed to examinations will consent to act on the society's behalf in accordance with the rules laid down for its conduct. No limit as to age, position or previous training of the candidate will be imposed. The new syllabus is now ready, and intending candidates should send a penny stamp for a copy of it. Copies of the examination questions set by the Society's examiners in previous years—price 1s., complete—can also be obtained on application to the Secretary, R.H.S., 117, Victoria Street, London, S.W.

**National Sweet Pea Society.**

An extraordinary general meeting will be held at the Hotel Windsor, on Tuesday, October 7, at 4 p.m., to consider a proposed alteration of Rule 7.

**Apples in Texas.**

The Red River fruit belt in northern Texas is proving to grow Apples very successfully. The varieties most grown, named in order of popularity, are Ben Davis, Jonathan, Red June, Early Harvest, Black Twig, Winesop and Gano, with many other varieties on trial.

**Importations of Sweet Potatoes.**

Large quantities of the Sweet Potato (*Ipomæa Batatas*) are about to be imported to this country from Barbados, "by special request of the Imperial Department of Agriculture for the West Indies. They will be shipped in barrels of about 1cwt. to Pink and Sons, at Portsmouth. Sweet Potatoes are cooked by boiling, roasting, and broiling, and can be used in pies, rissoles, and other dishes."

**Assisting Infirm Gardeners.**

As a practical instance of what might be done in the cause of charity by the clergy of the Church, we would cite the efforts yearly made by the Rev. W. Wilks, M.A., Vicar of Shirley, on behalf of the Gardeners' Royal Benevolent Institution. We quote from the "Croydon Advertiser," of September 27:—"Shirley Church Harvest Thanksgiving, October 5, 1902. Sermon at 11 o'clock a.m., by the Rev. Prof. George Henslow, M.A. Offertories throughout the day for the Gardeners' Royal Benevolent Institution." At other harvest thanksgivings, special appeals in aid of the funds of this charity might quite appropriately be made.

**Changes at Kew.**

Mr. Frank Garrett, for about fifteen years foreman of the Greenhouse and Ornamental Department at Kew, has been appointed head gardener to the Duke of Marlborough, at Blenheim, Woodstock, in succession to Mr. Whellans. At Kew, Mr. Garrett's vacancy will be filled by Mr. A. Osborn, for some time deputy foreman in the Ferneries. Mr. Dawe, till recently the deputy foreman in the Arboretum Pits, has been appointed to a responsible post in Uganda, and his position at Kew is filled by Mr. F. Stayner, late of Messrs. Veitch's. The Royal Gardens' control shortly will be transferred from the Board of Works to the Board of Agriculture.

**Gardeners' Winter Session at Ipswich.**

The third session of the Ipswich District Gardeners' and 'Amateurs' Association till the end of the present year will include lectures as follows:—October 2.—Garden Roses, by Mr. F. Cant, Colchester; October 16.—Germination of a Seed, by Mr. A. Martinielli, illustrated by specimens and drawings; November 6.—Spring Bedding, by Mr. I. Battram, Oakland Gardens, Ipswich; November 20.—Discussion on Chrysanthemums, &c. December 4.—Carnations, Tree and Malmaison, by Mr. W. E. Close, Holy Wells Gardens; December 18.—The Sweet Pea Family, by Mr. S. J. Batchelder. The hon. secretary is Mr. W. E. Close, of Holy Wells Gardens.

**Mr. W. H. Patterson.**

The recent changes and reduction in staff at the Swanley Horticultural College have brought promotion for the Superintendent, Mr. W. H. Patterson, for he has accepted the post of lecturer in horticulture, and keeper of the gardens to the senate of University College, Reading. Though he had been but a short while at Swanley, having accepted a six months' engagement to reorganise the garden work, great changes and improvements were effected in the time, and it seems a pity the committee should consider it necessary to adopt the retrogressive step of excluding men students, for if horticulture is to advance greatly by means of training colleges, it is to the men that most of the future depends. Fortunately Reading fully recognised this fact, and the work will be arranged for the benefit of those who are taking up the subject as a profession. Mr. Patterson, who assisted in the production of "Cassell's Dictionary of Gardening," under the editorship of Mr. W. P. Wright, has received botanical and horticultural training at the Technical College, Colchester, the Technical Laboratories of the Essex County Council as well as in Kew, market gardens, private places and nurseries.

**Canadian Florists 12,000 Strong.**

Mr. Joseph Bennett, of Montreal, the retiring president of the Canadian Horticultural Association, gives it as his belief that so many as 12,000 persons are employed in the florists' business in the Dominion of Canada.

**Medal Award.**

"I see in the Journal of September 25 you state that a silver Knightian Medal was given by R.H.S. for the collection of fruit from Tilgate, Crawley. It should have been Silver-Gilt Knightian. Will you please correct it in the next issue?"—E. N.

**Lost in the Post.**

We have received a label bearing the postmark "Mayfield, Sussex," and dated September 25, and additionally stamped thus by the post office officials: "Found in E.C. without contents." The address is correctly and clearly written on the label, which must have become unclosed from the parcel.

**United Horticultural Provident Society.**

The annual dinner of this society as previously announced to be held on Tuesday, October 7, has been unavoidably postponed. It will now be held at the Holborn Restaurant (Throne Room), High Holborn, W.C., on Thursday, October 16, at 6.30 p.m. Arthur W. Sutton, Esq., F.L.S., V.M.H., will preside.

**Meetings at Cardiff.**

The members of the Cardiff Gardeners' Association have drawn up another bright, varied and useful syllabus of lectures to be delivered during the coming months at their meetings. Competitions for plants, vegetables and fruits are arranged for three of the evenings. The hon. secretary is Mr. J. Julian, 15, Bertram Street, Roath.

**Ascot Chrysanthemum Exhibition.**

The Ascot, Sunninghill, Sunningdale and District Horticultural Society will hold its eighteenth annual exhibition of Chrysanthemums and other autumnal flowers, with fruits and vegetables, on Wednesday and Thursday, November 5 and 6. There are three good open classes for groups; schedules may be had from Mr. H. R. Attfield, Ascot.

**Torquay Gardeners' Association.**

The programme of essays and lectures for 1902-03, to be given before the members of the above, has been lately published. Many of the lectures are to be of a scientific character, on the subject of plant life. Prizes are offered in certain classes set apart for each of the meetings. The hon. assistant secretary is Mr. George Lee, The Gardens, Upton Leigh, Torquay.

**Seed Potatoes [for South Africa.**

From "South Africa" for September 20, we learn that a Mr. W. J. Malden, who is said to have made a study of this esculent, writes protesting against the announced intention to get supplies of Potatoes for planting purposes in the newly-acquired South African colonies from Madagascar and the Soudan, the reason for selecting these countries to supply the sets being that it is supposed they are "acclimatised" to South African conditions. The South Africans will find these relatively just about as useful as the worn-out remounts which found their way to South Africa during the war, and it is hoped someone will be led to stop such an unscientific and unpractical step as the using of "worn-out or acclimatised" Potatoes. Otherwise, before the stocks sent out can possibly be developed to quantities that can substantially help the country they will have broken down altogether. New varieties are desirable.

**Meeting at Shirley, Hants.**

The following is a list of the awards made for exhibits on September 22, at the Gardeners' meeting:—Certificate of Merit to Mr. Jno. Miles for wasps' nests; W. H. Rogers and Son, collection of Roses (very fine), F.C.C.; Mr. F. Cozens, two very pretty seedling Pompon Dahlias, F.C.C.; twenty-four Cactus, V.H.C.; and twelve Show H.C. Mr. Wilcox, V.H.C. for collection of Cactus Dahlias, and a dish of Strawberry (St. Joseph) from the open. Mr. B. Ladhams, V.H.C. for a very fine stand of cut blooms; and Mr. Tomsett commended for twelve single Asters. A hearty vote of thanks was given to Mr. Miles for his address on wasps, also to the exhibitors and to the chairman for presiding. The next lecture will be given on October 20, by Mr. James Hudson, V.M.H., Gunnersbury Park, Acton, W., on the Cultivation of Figs.—J. M.



## Afternoon.

Rest.—But the rest is not enjoyed unless the morning and quite the early part of it has been filled with good useful work. Idlers have no right to an afternoon. I only wish that all of us could put away our work and cares with the morning toil. To some of us afternoon only comes very late in life; to some of us never. A perfect type of afternoon comes in with St. Michael; such a sweet calm, such a peaceful, restful feeling in the air. There is none of the alertness of spring, no biting, cutting east winds; rather the soft, damp breezes of the west, the morning mists that hang long and close in early. If there is a touch of frost it soon fades away; the days are rainless, indeed, rather too rainless for these poor town folk with their depleted reservoirs. The dew is thick on grass and hedge, and glistens in the mellow light. The scents of autumn cannot be described by the word "sweet," they are aromatic, and appeal to the senses far more than do mere sweetnesses.

It is said that only those of noble birth can detect the scent of the dying Strawberry leaf, but a very plebeian can enjoy the scents of the autumn garden and field. I am always so glad to welcome the pungent Chrysanthemum, the late Mignonette, the homely Turnip, and, above all, the slightly acrid smell of burning weeds and rubbish. We have not reached that point where decay becomes apparent, it is only afternoon yet. The lawns are green, the flower borders intensely bright and gay with all vivid colours. As the season wanes the colours deepen. There are flaming reds, gorgeous crimsons, brilliant purples, burning ambers, golden yellows, and warm, rich browns. I must not forget the jet black of the Elder and the purple-black of the Sloe. For wonderful shades of colours, commend me to the Fungi tribe as found in deep woods, and do not forget the little white deliciously flavoured "buttons" of the field. Talk of Mushrooms from beds! Well, if you have nothing better be content; but get up with me in the uncertain twilight, and let us gather fresh from their grassy bed, soaking in dew, the little natural-born Mushrooms. If you are honest you will say which has the better flavour cooked.

I do not know any pursuit so alluring as the pursuit of the Mushroom. You have so many surprises and so many disappointments, and there is such a feeling of satisfaction when you have filled your basket. I wager you come home with an enormous appetite, and also with very wet boots! Never mind, they will dry, and you have filled your lungs with good, fresh air, and exercised your muscles (especially those in the small of the back). Ought I to say a word about caution? I do not know. If you have not the gift to distinguish the real from the false I cannot put it into you.

Now is the time for the Red Admirals, the Tortoiseshells, the Peacock, the Painted Lady—they are all dressed in autumnal tints, and so harmonise with giant Sunflowers, the Dahlia, and the "Daisy of St. Michael." How that Daisy has become legion! In my younger days it was such an undecided mauve, and generally imperfect in shape; now you are met with improved varieties on every hand. My Holly tree is more than "well set" with berries, on the north side, and the last year's berries lingered till mid August. I suppose the birds had better and juicier fruit. One funny part I noticed was that they freely ate of the bright coloured Victoria Plum, but left the more luscious Green Gage severely alone. How was that? Did other people notice the same fact?

Talking of Plums, which are my "perk," I had only about 10st of Green Gages to sell, as against 40 last year; and of a little rose-coloured Plum 15lb, as against 20st. It has made a difference to my pocket. We have eaten our last Apple pie, that is, of Apples of home production. I cannot put Pears into a pie, nor yet into mince-meat. This has been a Pear year here, and so I indulge the family with stewed Pears, treated with Elder fruit syrup. I give this recipe gratis. The only difficulty I find is that we cannot cook enough Pears for our needs. There is a great call on the stock. I wish it were all afternoon. That sounds as though I were idle; but no, only tired. I should like to lay down my burden, as all Nature is doing, and rest. You grow while you sleep, and wake with fresh vigour. I should like to keep a year of Sabbaths; I think my work would be better afterwards.

Even down here in the heart of the sweet country we are beginning to have city notions and losing somewhat of

our calm. I know there are people who think our life lethargic, but because ours is different they cannot gauge it, and I fancy we have as much to show at the end of the year as the bustling town dweller. At any rate, we oftener see the sun rise, and have done a good day's work before office or shop is opened. We can afford to rest with the set of sun, and to take an occasional holiday in the afternoon of the year.—THE MISSUS.

## Odd Notes.

### Flowers for Church Decoration.

Flowers are never out of place in beautifying a church or a chapel, except when the use of them is overdone, or inartistically carried out. Using too many, or huddling them together, is bound to have a bad effect, and by no means should it be countenanced. Glaring colours are out of place, though in harvest festivals the use of bright colours, such as red and yellow, may be employed in various arrangements with telling effect. Among the flowers available are Cactus and Pompon Dahlias, late-blooming forms of Helianthus, Pyrethrum uliginosum, Salvias, white, mauve, yellow, and white Chrysanthemums.

### Plants for Church Decoration.

Among foliage plants, Palms, such as the Kentias, and various forms of Adiantums among Ferns, are extremely useful. No better flowering plants in pots can be used than white Chrysanthemums, chief of which at the present season is Madame C. Desgranges. It is dwarf in habit, and specially chaste and pure in colour.

### Expensive Bulbs.

Large sums of money are spent in various ways nowadays, gardening having some enthusiasts in its ranks who can indulge in novelties in the shape of new bulbs and plants. Of the former there are some high-priced bulbs of Narcissi catalogued at £21, £20, 10 guineas, 7 guineas, and 5 guineas.

### Cheap Bulbs.

Although the newest and choicest varieties of Narcissi and other bulbs are naturally dear when first introduced, it is gratifying to know that by naturally increasing, they in time become plentiful and cheap, losing none of their characteristics in the process of multiplying. The varieties of Narcissi are specially amenable to rapid increase by cultivation, hence it is that now there are quite a number of excellent Daffodils which may be obtained from bulb merchants at a cheap rate for extensive planting. The pages of the bulb number and other numbers of the Journal testify to this.

### Cinerarias.

The weather has been excellent for Cinerarias, and they have made rapid growth of foliage and abundant roots. Plants in small pots should be transferred to larger before they become pot-bound. On the appearance of grub in the leaf, crush the insects. Green fly must be destroyed by nicotine fumes, dosing them when the foliage is dry.

### Lifting Salvias.

Salvia splendens growing outdoors may be readily lifted and potted for blooming in the greenhouse. These plants make quite an effective display of rich scarlet blooms for a considerable period, which may be extended when the colder weather arrives by subjecting the plants to a little heat under light conditions.—E. D. S.

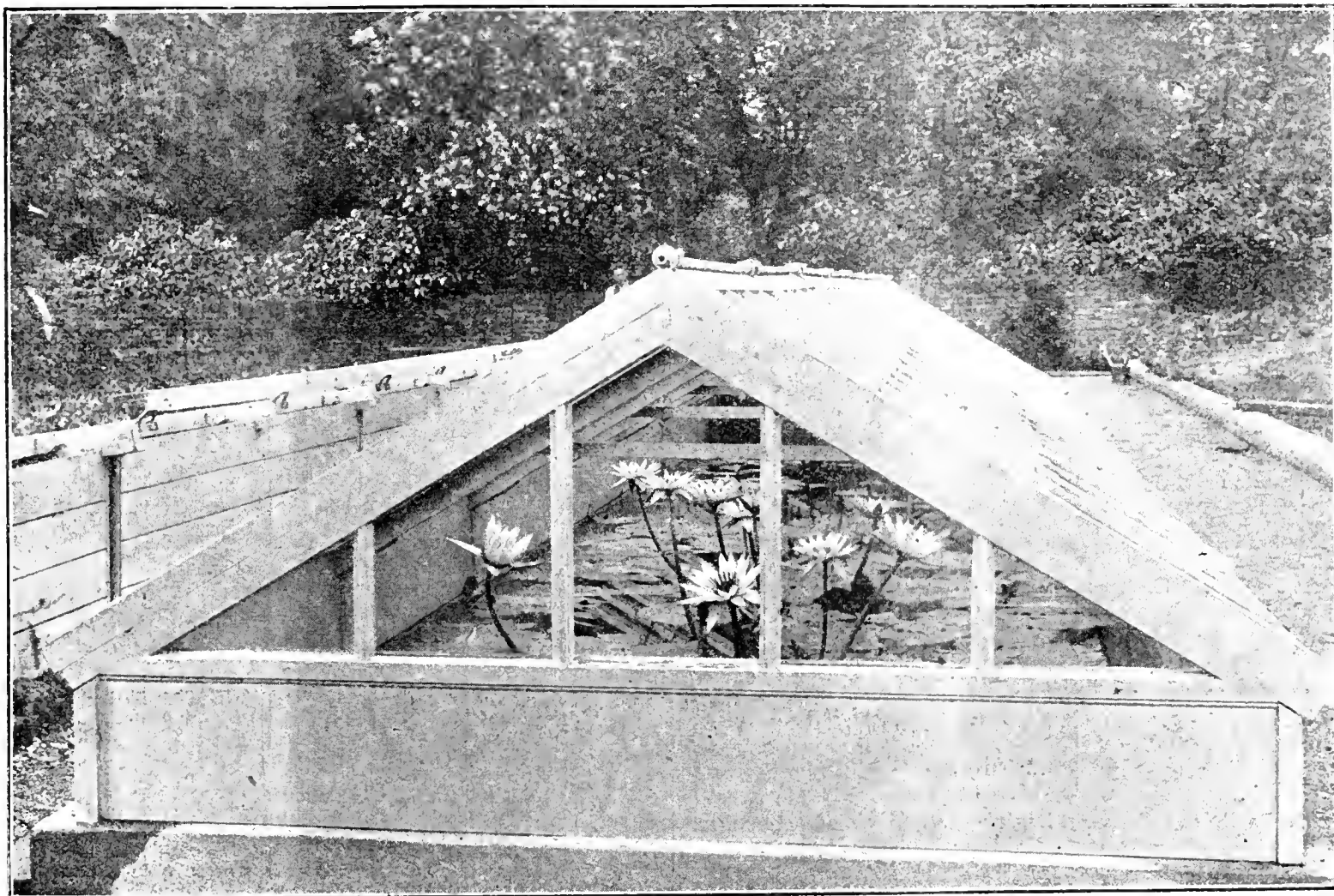
## NYMPHÆA STELLATA AT GUNNERSBURY.

The gardens of Leopold de Rothschild, Esq., at Gunnersbury House, Acton, Middlesex, under the charge of Mr. James Hudson, are famed for a number of specialities, including the wall-gardening, the fruit-growing, the possession of a Japanese garden as a feature, also specimen scented Pelargoniums, Roses, the "Bamboo" collection, and, to conclude with, the unrivalled Water Lilies. *N. stellata* and *N. s. pulcherrima* are cultivated both under frames such as that shown in the illustration (from a photograph by Mr. J. Gregory, of Croydon) and also during summer in an open-air basin specially constructed for them in the recently formed Japanese garden, the water within which is warm, being conveyed in galvanised lin pipes covered with felt and enclosed in drain pipes, from one of the warm houses. The position out of doors is, of course, sheltered, and the plants grow strongly, sending up hosts of their large and beautiful lavender-blue flowers. In the frames much attention is accorded in keeping the leaves, which form dense masses of stalks and blades, free from decaying matter and confervæ. For this purpose the water is skimmed at least once every day with a fine-meshed net. If market men, or at least a few of them, could cultivate the Blue Water Lily with the same success as does Mr. Hudson, the profits from the sale of the dozens of cut flowers which robust plants will produce weekly would, indeed, be very considerable.

## Among the Fruit Trees.

We have heard a great deal this season about the scantiness of the Apple crop, and there can be no doubt that in some orchards and plantations the crop is a lighter one than it has been for years; on the other hand many trees may be met with laden with good, though not very highly coloured, fruits. I have read several reports of the fruit crops in Warwickshire, and each seems to indicate that the Apple crop is a complete failure. Such reports do not by any means give an accurate account applicable to the county generally, though they may be true of certain localities. In some of the warmer districts fruit of all descriptions is very scarce, while in the colder ones Apple and Plum trees are as a rule, carrying good crops. Another point I have noticed is that isolated trees, the branches of which have been kept fairly thin, are fruiting better than those in more sheltered positions. These things seem to indicate that where full exposure retarded the blossom buds, they were just late

like the present. When it is done during the first week in August the cut-back shoots do not often start into growth again, but they sometimes will. It is, therefore, scarcely safe to cut the side shoots closely upon spur-pruned trees. This necessitates going over them again during the autumn or winter. Pruning during September, however, answers the purpose of summer and winter pruning too, as the shoots may be cut back to any point without fear of their starting again, and while the leaves are yet on the trees, it is easy to see exactly how much thinning is necessary. Some maintain that trees cannot be completely pruned until the fruit has been gathered, and this is certainly true of any which have been neglected, because many of the bearing shoots will need cutting away in consequence of being worn out, or to allow more light to penetrate to the inner branches. Such cases are, therefore, exceptions to the rule, that pruning can be completed now instead of during the winter. On the other hand, when the thinning of the shoots is regularly performed each year as a rule only the young wood requires to be removed or shortened; this, there-



*Nymphaea stellata* at Gunnersbury.

enough to escape the May frosts. I am more than ever convinced of the wisdom of planting on upland sites rather than in the lowlands, even when it has to be done at a disadvantage with regard to soil.

A greater amount of sunshine throughout the summer would have been decidedly beneficial for fruit trees, but I question if we have had too much rain. Two or three dry seasons previously had the effect of greatly limiting the growth of trees, causing them in innumerable instances to become stunted. Fruit trees which continue in that condition for long, may bear well for a few years, but the fruit gets smaller, and the trees become weaker each year, until for a time they are almost worthless, unless special methods of feeding are adopted. The copious rains of 1902 have promoted growth in a remarkable degree, and when the trees get suitable treatment there is no reason why that growth should not yet become well ripened, as a fine late September and October always benefits fruit trees immensely. Raisers of trees have, no doubt, blessed the rains of early summer, as young trees have made more growth since then than they sometimes do in two years.

Summer pruning is of special benefit during seasons

fore, can be done better now than later on, because it lets in the light to ripen both wood and fruit. Young shoots which are not required should be cut back to within two or three buds of their base. When the terminal shoots on a branch are strong and sturdy they need no shortening. If they are long and thin, in fact not self-supporting, shorten them back moderately, not hard, as some pruners cannot resist the temptation of doing, and as a result get several strong shoots the following year. When a shoot is very weak cut it back hard. Any shoots which are still growing freely at the points should have the soft portion removed, even if they are strong and erect and do not require shortening on that account. Varieties like Lady Sudeley, which fruit on the tips of the shoots, should have the ends of the leaders removed, the side shoots being thinned, and those retained left unshortened.

A good many controversies have been waged in regard to this point, viz.: Will Apple or Pear trees produce a shoot on which fruit buds will form during the same year (except on the points)? Of course they will. It just depends upon the variety. Early sorts often do this, but late ones seldom.—WARWICK.



## Peaches and Nectarines.

### Their Classification and Selection of Varieties.

(Concluded from page 294.)

Following the classified list, with original illustrations of my own, the lists of varieties of the Peach and Nectarine as under, may be found useful to those who are interested in the culture of these delicious fruits.

#### SELECTIONS OF PEACHES AND NECTARINES. PEACHES.

##### I.—Very Early Varieties. Season: Mid-July to early August.

|                |              |
|----------------|--------------|
| Alexander      | Early Louise |
| Amsden June    | Early Rivers |
| Early Beatrice | Waterloo     |

##### II.—Second-early Varieties. Season: Beginning to Middle of August

|                       |                      |
|-----------------------|----------------------|
| A Bec                 | Early York           |
| Condor                | Hale's Early         |
| Dagmar                | Large Early Mignonne |
| Early Alfred          | Merlin               |
| Early Grosse Mignonne | Rivers' Early York   |

##### III.—Early Mid-season Varieties. Season: Middle to end of August.

|                  |                 |
|------------------|-----------------|
| Acton Scott      | Dr. Hogg        |
| Belle de Doué    | Golden Rathripe |
| Crawford's Early | Magdala         |
| Crimson Galande  | Sulhamstead     |
| Early Silver     |                 |

##### IV.—Main Mid-season Varieties. Season: Beginning to the middle of September.

|                      |                 |
|----------------------|-----------------|
| Alexandra Noblesse   | Grosse Mignonne |
| Bellegarde (Galande) | Noblesse        |
| Belle Beauce         | Red Magdalen    |
| Dymond               | Royal George    |
| Exquisite            | Stirling Castle |
| Goshawk              | Violette Hative |

##### V.—Late Varieties. Season: Middle to end of September.

|                      |                   |
|----------------------|-------------------|
| Albatross            | Prince of Wales   |
| Barrington           | Princess of Wales |
| Late Admirable       | Raymaekers        |
| Marquis of Downshire | Sea Eagle         |

##### VI.—Latest Varieties. Season: End of September to middle of October.

|                 |                     |
|-----------------|---------------------|
| Comet           | Lord Palmerston     |
| Desse Tardive   | Nectarine Peach     |
| Gladstone       | Osprey              |
| Golden Eagle    | Salwey              |
| Lady Palmerston | Téton de Venus      |
| Late Devonian   | Walburton Admirable |

#### NECTARINES.

##### I.—Earliest Varieties. Season: End of July to middle of August.

|              |                     |
|--------------|---------------------|
| Advance      | Goldoni             |
| Cardinal     | Lord Napier         |
| Early Rivers | Précoce de Croncels |

##### II.—Second-early Varieties. Season: Middle to end of August.

|                    |                  |
|--------------------|------------------|
| Darwin             | Pitmaston Orange |
| Downton            | Rivers' Orange   |
| Hardwicke Seedling | Rivers' White    |
| Improved Downton   | Stanwick Elrue   |
| Murrey             | White            |

##### III.—Mid-season Varieties. Season: Beginning to middle of September.

|               |                 |
|---------------|-----------------|
| Albert        | Humboldt        |
| Albert Victor | Newton          |
| Balgowan      | Oldenburg       |
| Byron         | Pineapple       |
| Elrue         | Violette Hative |
| Dryden        |                 |

##### IV.—Late Varieties. Season: Middle of September to early October.

|                 |           |
|-----------------|-----------|
| Galopin         | Spencer   |
| Milton          | Victoria. |
| Prince of Wales |           |

#### SELECTIONS OF PEACHES FOR VARIOUS PURPOSES.

Varieties for growing against a south wall in all but cold localities, named in their order of ripening.

##### Twelve Varieties.

|                 |                    |
|-----------------|--------------------|
| Waterloo        | Grosse Mignonne    |
| Early Louise    | Alexandra Noblesse |
| Hale's Early    | Stirling Castle    |
| Dr. Hogg        | Bellegarde         |
| Crimson Galande | Barrington         |
| Dymond          | Gladstone          |

##### Six Varieties.

|              |                 |
|--------------|-----------------|
| Waterloo     | Noblesse        |
| Hale's Early | Violette Hative |
| Dymond       | Late Admirable  |

##### Three Varieties.

|              |            |
|--------------|------------|
| Hale's Early | Barrington |
| Dymond       |            |

##### Two Varieties.

|              |                  |
|--------------|------------------|
| Hale's Early | Grosse Mignonne. |
|--------------|------------------|

##### One Variety.

Dymond.

Varieties for growing against a south wall in favourable localities or in a cool house.

|                       |                    |
|-----------------------|--------------------|
| Waterloo              | Grosse Mignonne    |
| Early Louise          | Alexandra Noblesse |
| Hale's Early          | Stirling Castle    |
| Early Alfred          | Noblesse           |
| Large Early Mignonne  | Exquisite          |
| Early Grosse Mignonne | Bellegarde         |
| Rivers' Early York    | Violette Hative    |
| Dr. Hogg              | Barrington         |
| Crimson Galande       | Sea Eagle          |
| Condor                | Gladstone          |
| Dymond                | Late Admirable     |
| Goshawk               | Golden Eagle.      |

Hardest varieties suitable for northerly districts against a south wall, but in high and cold localities require glass.

|                    |                    |
|--------------------|--------------------|
| Waterloo           | Alexandra Noblesse |
| Early Louise       | Dymond             |
| Hale's Early       | Red Magdalen       |
| Rivers' Early York | Violette Hative    |
| Dr. Hogg           | Barrington         |
| Crimson Galande    | Late Admirable.    |

Varieties for a wall-case with a south or south-west aspect.

##### Twelve Varieties.

|                 |                   |
|-----------------|-------------------|
| Alexander       | Royal George      |
| Early Rivers    | Noblesse          |
| Hale's Early    | Bellegarde        |
| Condor          | Princess of Wales |
| A Bec           | Gladstone         |
| Grosse Mignonne | Golden Eagle.     |

##### Six Varieties.

|                 |              |
|-----------------|--------------|
| Early Louise    | Royal George |
| Dr. Hogg        | Noblesse     |
| Grosse Mignonne | Barrington.  |

##### Three Varieties.

|                 |                 |
|-----------------|-----------------|
| Hale's Early    | Late Admirable. |
| Stirling Castle |                 |

##### Two Varieties.

|              |         |
|--------------|---------|
| Hale's Early | Dymond. |
|--------------|---------|

##### One Variety.

Stirling Castle.

Varieties for forcing.

##### Earliest.

|             |                |
|-------------|----------------|
| Alexander   | Early Beatrice |
| * Waterloo  | * Early Louise |
| Amsden June | Early Rivers.  |

##### Second Early.

|                    |                    |
|--------------------|--------------------|
| * Hale's Early     | * A Bec            |
| Early Alfred       | Condor             |
| Dr. Hogg           | Rivers' Early York |
| Alexandra Noblesse | Crimson Galande    |

##### Mid-season.

|                 |                 |
|-----------------|-----------------|
| * Dymond        | Noblesse        |
| Stirling Castle | Violette Hative |
| Grosse Mignonne | * Bellegarde    |
| Royal George    | Late Admirable. |

##### Late.

|                   |                       |
|-------------------|-----------------------|
| Princess of Wales | Nectarine Peach       |
| * Sea Eagle       | * Walburton Admirable |
| Gladstone         | Golden Eagle.         |

\* Two varieties of each section.

Varieties to give a long succession of fruit.

|              |                 |
|--------------|-----------------|
| Waterloo     | Stirling Castle |
| Early Louise | Bellegarde      |
| Hale's Early | Late Admirable. |

##### Two Forcing Varieties.

|               |                  |
|---------------|------------------|
| Hale's Early. | Stirling Castle. |
|---------------|------------------|

##### One Forcing Variety.

Royal George.

#### NECTARINES.

Varieties for growing against a south wall in favourable localities.

|                    |                 |
|--------------------|-----------------|
| Advance            | Balgowan        |
| Lord Napier        | Elrue           |
| Goldoni            | Violette Hative |
| Murrey             | Dryden          |
| Improved Downton   | Spencer         |
| Hardwicke Seedling | Victoria.       |

Six hardest varieties suitable for northerly districts against a south wall, but on high and cold localities require glass.

|                    |                  |
|--------------------|------------------|
| Murrey             | Balgowan         |
| Hardwicke Seedling | Elrue            |
| Downton            | Violette Hative. |

##### Three Varieties.

|                    |                  |
|--------------------|------------------|
| Hardwicke Seedling | Violette Hative. |
| Balgowan           |                  |

Varieties for a wall-case.

|                |           |
|----------------|-----------|
| Early Rivers   | Humboldt  |
| Lord Napier    | Pineapple |
| Rivers' White  | Dryden    |
| Goldoni        | Milton    |
| Rivers' Orange | Spencer   |
| Stanwick Elrue | Victoria. |

|  |  |
|--|--|
| <i>Six Varieties.</i>                                |  |
| Early Rivers<br>Lord Napier<br>Stanwick Elruge       | Humboldt<br>Dryden<br>Victoria         |
| <i>Three Varieties.</i>                              |  |
| Lord Napier<br>Elruge                                | Victoria.                              |
| <i>Two Varieties.</i>                                |  |
| Lord Napier  | Humboldt.                              |
| <i>One Variety.</i><br>Stanwick Elruge               |  |
| <b>Varieties for forcing.</b>                        |  |
| <i>Earliest.</i>                                     |  |
| Cardinal<br>Précoce de Croncels                      | Advance<br>Early Rivers                |
| <i>Second Early.</i>                                 |  |
| Lord Napier<br>Darwin                                | Rivers' Early Orange<br>Rivers' White  |
| <i>Mid-season.</i>                                   |  |
| Elruge<br>Goldoni<br>Humboldt                        | Violette Hative<br>Pineapple<br>Dryden |
| <i>Late.</i>   |  |
| Prince of Wales<br>Spencer                           | Victoria<br>Galopin                    |
| <i>Three for Early Forcing.</i>                      |  |
| Cardinal<br>Précoce de Croncels                      | Early Rivers                           |
| <i>Three for Second-early.</i>                       |  |
| Lord Napier<br>Rivers' Early Orange                  | Stanwick Elruge                        |
| <i>Three for Mid-season.</i>                         |  |
| Elruge<br>Violette Hative                            | Humboldt                               |
| <i>Three Late.</i>                                   |  |
| Pineapple<br>Dryden                                  | Victoria                               |
| <b>Varieties to give a long succession of fruit.</b> |  |
| Early Rivers<br>Lord Napier<br>Stanwick Elruge       | Humboldt<br>Pineapple<br>Victoria      |
| <i>Best quality Nectarine.</i><br>Stanwick Elruge    |  |
| <i>Best Forcing Nectarine.</i><br>Pineapple          |  |

--G. ABBEY.

## White Heathers.

At present *Erica cinerea*, the fine-leaved Heath, has the most beautiful variations of tone to be found in any one of our hardy Heaths. In the *Calluna*, the Heather or Ling, there are fewer good colours, the tones in some of the varieties being somewhat dull, although effective enough when seen in masses. Few plants show such a diverse habit as the Heather, and what with dwarf and tall, spreading and erect, variegated leaved, and varieties with flowers from pure white to deep crimson, and many shades between, one may have a rich display of colour, with much interest in the autumnal garden from the presence of this one moorland flower and its varied forms alone. If the choicest of forms were selected, such would surely be the white Heathers, and by these are meant the white flowered *Callunas*, for it may be well to refer to the British *Ericas* as Heaths. *Calluna v. dumosa*, is of dumpy, stiff habit, as neat as a trimmed Box edging, and the earliest of all white Heathers to commence flowering. The similar stiff habit is seen in the varieties *Hammondi*, *tomentosa alba*, and *Serli*, although not to the same extent; and while *dumosa* is a very dwarf plant, these three white Heathers rise in a fastigiate way to several feet in height. One of the prettiest Heathers is *C. vulgaris alba*. It is much looser in growth than those already mentioned, and is dwarf without being stiff. This is an elegant rock garden plant. At the recent Caledonian Flower Show, Mr. Hayes, nurseryman, Keswick, included in a stand of Hardy Heaths and Heathers a charming seedling *Calluna*. Its well chosen name is *Calluna vulgaris gracilis*. It is a spreading plant, with numerous very slender shoots, that are well wreathed with blossom. The diffuse habit of this seedling will render it an admirable companion and contrast to the sturdier varieties, while none could wish for a better representative of the Scotch Heather with which to adorn the rockery or garden.—D. S. FISH.

## Gadding and Gathering.

"HERE AWA', THERE AWA'."

For many generations now, the Rivers of Sawbridgeworth, in Hertfordshire, have cultivated fruit and farmed their extensive estate in that picturesque district. Their work continues still on the lines that have placed the firm high and secure in its reputation for quality in the stock produced. New orchards of trees that are readily saleable take the place of those that have gone before, and even extra ground has been taken under fruit culture during the past few years. The older orchards are remarkably fruitful, especially the Plums, and so are some of the Apples, even in this unfavourable year; but the promise all round at the flowering time was rosy indeed, till frost withered both flowers and hopes.

### Varieties of Plums.

Many acres are devoted to orchards of standard trees, the ground beneath them being kept clean by surface culture. Plums and Apples are grown thus extensively with Currants occasionally beneath and between the lines of well developed trees. At the time of my visit during the last week in August, Czar Plums were being gathered from the trees, and tons each day were despatched to the London and Birmingham markets, where good prices were accorded. Czar Plum has been heavy this year at Sawbridgeworth. Monarch promised excellently. This is an oft decried variety, and private gardeners are said to affirm that they fail to fruit it. Under genuine orchard-culture on the Rivers' estate it ropes the branchlets heavily with handsome fruits, and is consistently a successful cropper. Grand Duke was seen in splendid condition, and affords a good late dessert Plum for walls. In normal seasons fruits ripen in the middle of October, and besides being very large, the flavour is altogether excellent. Diamond, a good black cooking Plum, for use at the end of this month, is hardy, vigorous, and prolific, and the sight of a "screen-belt" of it bearing prolifically, gave one more confidence than before, if that were needed, in its attributes of hardiness. Williams' Golden Gage, a big, handsome Plum, crops moderately one year, and generally misses the next; it may be less popular on that account. Sultan is an early kitchen Plum, with large round fruits of a dark red colour, and yields a full crop regularly. Another reliable variety for orchard culture is Autumn Compôte. It may be seen in a well-developed state at the present time (middle of September), and begins now to yield its handsome red fruits. Grand Duke is a seedling from it.

Pershores, of course, require no description, but is it generally known that serviceable fruiting trees of the variety are readily attained from suckers? Their habit, when developed, however, causes them to produce suckers luxuriantly, which places them somewhat under a ban. Still, among Plums, comes Belle de Louvain, a dark purple kitchen sort, in use as August closes. This has also yielded satisfactorily in a poor fruit year in the orchards, and so has the Early Orleans, which was being gathered a month ago. Its agreeable, juicy character is appreciated. Fruiting on the borders of the plantations was the common Damson, the true old variety, which must recall to many minds the orchard scenes of one's earliest years.

The late Mr. Thomas Rivers raised a large number of seedling Plums, among which are the names of most of those I have mentioned. His heirs to-day continue the work of crossing and raising. Deeply set amidst an orchard of trees of a newer generation, stands the original Early Rivers Plum bearing an inscription which informs the visitor that:—

This is the original tree of the  
Early Prolific, or Early Rivers Plum,  
raised by Thomas Rivers in 1834.

The gnarled patriarch (for Plums are not famed for longevity) is lichen-covered, having two main trunks and others branching from them, these being propped up on two or three sides. The variety is a very early kitchen Plum, and generally well known. Under glass, in pots, the Early Transparent Gage delighted the eyes and tempted the palate, for it is an undoubted gem amongst early Gage Plums. Transparent Gage ripens some days later.

In season at the present time are Bryanston Gage, a round, greenish-yellow, juicy sample; Denniston's Superb, which we find fruiting well on a gravelly loam, and trained to a south wall. It is robust and a free grower. The fruits are greenish-amber, of large size for a Gage, round in form, with a sweet, juicy flesh. Reine Claude de Bavay, comes into use now, and furnishes another variety of fruitful character, and generally dependable. A new Gage is the Reine Claude du Comte Atthem, a very fine, round and red, late Plum, with fruits of good size, firm and excellently flavoured. Mr. S. T. Wright finds it succeed satisfactorily on his dry, sandy soil at Chiswick, and speaks in its favour. The same remarks apply to the early ripening McLaughlin's Gage, a greenish-yellow American Plum of merit.

Of the dessert Plums not already mentioned, I may name the lovely little Coe's Golden Drop; the popular Jefferson, good for any garden; Kirke's, which, if memory serves us right, was disqualified in a class at the fruit show last week, and stated to



be "a Gage Plum." The large, deep blue-purple fruits are very beautiful on a dinner table, and delicious for dessert. The tree is hardy and a splendid cropper, doing well on gravelly loams in the north. Washington is still another handsome and good September dessert Plum. Added to the culinary varieties may be named the Red and the White Magnum Bonums.

#### Cross-bred Varieties.

The matter of cross-breeding was broached. This is a very necessary work; it is also a remarkably testy and trying one. In the earlier days when varieties of general superior quality were few, the experimentalist's perseverance along this line was pretty sure of a number of successes in the period of a dozen years; but now the field is filling up, and though there are better results obtainable through crossing improved sorts with one another, yet the excellence demanded is very high indeed, and requires much patience, and judgment, and ripe experience on the part of cross-breeders and introducers of new varieties, to ensure any advance. A variety is crossed this year at the flowering time. Presuming that the cross is effective and fruit has ripened, the seeds are sown. They germinate, and the seedlings are potted-on. In five years or six, they are yielding fruit, and this has generally to be proved for one or two seasons. That being so, before a selection, and a few trees are ready for commerce, ten years of one's lifetime have gone. Of course, one sterling advance made, one high-class variety gained, during ten years, may well repay the labour; but again, it may not! and in any case the watching and waiting is always exacting.

It was interesting to view the trees left in the brakes from last season's selections. These are the "failures in life" if we may so term them, their co-evals having been drawn off in batches for the supply of customers, while they, from one cause or other, have been passed by, and there they stand, lonesome and separate, one here, another there, at wide intervals apart over the ground, and though they would make good trees if they were required, yet "it would not pay," as Mr. Somers Rivers informed me, to transplant them. They are, therefore, ingloriously consigned to the fire, and the whole brake is replanted with young stock, afresh. Growers may therefore feel assured that they only receive the freshest, best, and most robust of young trees.

#### Care in Budding.

August and early September are the months when budding is actively performed, and many hands were busy, and backs were bent among the Peaches on this occasion. The shoots bearing the buds are tied in little bunches and kept with their cut ends in tiny pails of water. Each variety has a number attached to it which corresponds with a number and name in a book kept by the firm. The stocks to be budded are each in lines 2ft apart, the plants being 1½ft from each other in the rows. The man who is budding takes a bundle of the shoots from the pail, and proceeds to make his cross and vertical cuts, nipping off a bud and smartly inserting it within the stock. Following close upon him is a boy who binds the stock and bud with raffia, and the business is completed. By working constantly during the day, a good budder will insert 1,000 buds. Very few of the buds fail to unite and grow, but should they fail in the case of Apples, Pears, and Plums, there is still a remedy by grafting in March or April. The results in the end are the same, but grafting is a more expensive operation than budding, hence the large fruit growers rely largely on the latter means of propagation.

After budding, the succeeding year's growth is allowed to fully develop, but the shoots are cut back to five buds or so, and the plants may be lifted and set wider apart. If they are intended to be "trained," it is imperative that they be set 2 or 3ft apart either way. As the shoots from the five or six buds advance, they are bent in the desired direction and secured to stakes—as in the case of fan-shaped trees. At the end of the second year from budding, the trees are again shortened in order that they may be better furnished and filled out, and are sold as two-years-trained trees.

Peaches are here in liberal numbers, many as pyramids in pots for this autumn's despatch, and pictures of health and careful training they are. Others are as trained standards for use on walls. These riders are generally planted to cover the top half of a house or wall, while the lower portion is occupied by a dwarf tree, which in time, but not immediately, may require the whole of the wall space. Others are trained as dwarf, bush, or pyramid trees. The bush-trained tree being the natural style of growth with the Peach, is the form recommended to amateurs, or to inexperienced growers, should they wish pot trees, or others for open-air culture free from walls.

#### Trained and Orchard House Trees.

Plums and Cherries may be had as standards, bushes, or pyramids. Apples and Pears are grown in all forms—cordons, dwarfs, pyramids, half-standards, and full-standards, or they may be had trained for espaliers and walls. Feathered Plum trees are mostly sought for by market growers, as the trees, being run up to a single straight stem, and so much as 8ft in height, with top and lateral shoots, can be transformed into almost any form of tree most convenient to the market-men's requirements.

Pot-grown trees in the orchard house were a feature of special interest. Most of the habitués of the James Street Drill Hall meetings have seen the fruitful Sawbridgeworth Gage Plums and other kinds of fruit trees, and the visitors to the Edinburgh Show on the 10th, 11th, and 12th of this month were likewise surprised and delighted to see such fine samples. Some of the trees are over twenty years of age. They stand 8 to 9ft high, and are confined to 12in pots. Each year, just as the leaves are falling, the trees are turned out of their pots, and as much of the surface and exterior soil as possible is clawed off with a small hand fork. The pots having been cleaned and dried, the balls are reinserted, and fresh, good compost is firmly rammed in. By this annual procedure, and by judicious feeding during the fruit-swelling period, the trees remain healthy and yield heavy crops of typical fruits for years. By having these fruiting plants always beside them, the firm is enabled to test their varieties, and to prove that their stock is all true to name. Most of the scions and buds are procured from these orchard house trees. Included in such houses are Cherries, Peaches, Nectarines, Plums, Pears, and Apples.

The vineries contain a great assortment of Grape Vines, many of them old, but so well cared for that they appear as vigorous and fruitful as the younger canes. Young Vines in pots, proved to be stout and well ripened. Oranges, and in fact the whole of the Citrus family, are cultivated and fruited. Even the Kew folks go to Sawbridgeworth occasionally for a species or variety which they require a stock of.

Specimen fruiting trees are protected in a new area with small meshed wire netting, which excludes the tiniest birds. Near by, it was decidedly interesting to see the battalions of pot Peach, Apricot, Cherry, and other trees already ripening off, each specimen ready in another season, wherever it may be despatched to, for fruit-bearing.

A practical and useful system of growing outdoor Pears was pointed out. The trees are grown on the gridiron or similar pattern, horizontally, over a wooden framework. This frame is 1½ft to 2ft from the ground, so that during the flowering period in April, sashes, mats, or tiffany can be fixed above the trees and render them sufficient protection to avoid any injury. By this simple means, grand fruits and good crops can generally be secured, and the trees, moreover, being free in the open, are well-ripened during the autumn.

Nuts are cultivated; also the Wineberry and other novelties, with Strawberries, Medlars, Mulberries, Quinces. Dwarf Prolific Walnuts, and other kinds of fruit. Even osiers for basket making and for tying bundles, are not omitted. One would like to particularise on certain fine varieties of the different fruits, but these may form a subject for another occasion. In concluding these notes, it may be useful to mention the fact that fruit alone does not comprise the subjects of culture at Rivers', for Roses, Conifers, hedge plants, and ornamental shrubs in variety are grown in considerable quantities.—WANDERING WILLIE.

### NORTH IRISH FLORA.

Mr. E. Lloyd Praeger, in his paper before the British Association on the composition of the flora of the north-east of Ireland, said that the counties of Down and Antrim formed the most easterly part of Ireland, and the portion which most nearly approached to Scotland. Their combined area was 2,148 square miles, and their flora numbered 820 species of flowering plants and vascular cryptogams, Antrim yielding 778 species, Down 752; the total flora of Ireland being reckoned at 1,020 species, and the average number occurring in an Irish county, according to present knowledge, at between 630 and 640. Down was formed of slates and granites, Antrim mainly of basalts. Limestone was very sparingly represented, and while the number of calcifuge plants in the flora was large, the calcicole group was poorly represented. With regard to the types employed by Watson to show distribution in Great Britain, there was in the local flora an almost complete representation of British type plants. English type plants were rather poorly represented, and were more plentiful in the Antrim than in the Down flora. Scottish type plants reached in Antrim their maximum for Ireland; in Down they were somewhat fewer. Of Highland type species there was a fair representation as compared with other Irish counties of similar character; Antrim, though of less elevation, contained more Alpine plants than Down. Germanic plants were extremely few in Ireland, being only thirteen in number; of these the district yielded but four. In Atlantic type plants Down and Antrim were comparatively rich. Turning to the types of distribution which the reader had recently proposed for the Irish flora, it was found that the district was naturally very poor in central type plants, which were largely calcicole and marsh species; while Munonian and Conacian species were practically absent. Marginal type plants, on the other hand, were very largely represented, while of Ultonian species Antrim was conspicuously the focus, Down being considerably poorer. Lagenian plants were only tolerably represented, their focus lying further to the southward.

## SENECIO CLIVORUM.

A new Central China and Japanese species, introduced by Messrs. James Veitch and Sons, Limited, Royal Exotic Nurseries, Chelsea, S.W., through their collector, Mr. E. H. Wilson. It is a hardy perennial, growing strongly to a height of 3ft to 4½ft, on moist, grassy spots on the mountains of its native habitats, and flowers about the end of July. The flowers are borne in the manner shown by the drawing on this page. They are orange-yellow in colour, ten or twelve in a head, and 4in across. The large leaves resemble those of the Butter-bur of our own native streams. The plant is likely to become a favourite in gardens, and has already received an Award of Merit when specimens were exhibited before the Floral Committee of the Royal Horticultural Society on August 18, in the James Street Drill Hall. Dr. Augustine Henry has described this species and its allies in the "Gardeners' Chronicle," September 20, 1902.

## Economy.

(Continued from page 239.)

Many men, many minds; a score of masters, twenty different methods of managing men. Let it be understood we are still dealing with the past, and from the loom of memory the shuttle of thought can easily pick up among the dropped threads of life that embodiment of fuss, fume, fret, and flurry, the clever (?), but cranky old gardener. Such a one is clearly presented to mental vision. More than once a friendly labourer's advice was, "Keep out of his way, my boy, he's ravaging round like a ramping lion; hear him, now, bellowing like a bull." Once, and once only, did this man of wrath unbend to his pupil with, "Go in among those Strawberries, boy, and get a good feed," with the qualification to "hurry up and not be all day about it." However, the sweet enjoyment was all too abruptly foreshortened with, "Get out, you little hog." A clever gardener? Yes; at least it was so assumed by those who measured ability by the vituperation of tongue deemed necessary to manage the garden, but more than a suspicion then crossed the youthful mind that there was something wrong, and now it is known as a fact that all was muddle and mismanagement. Constant friction between man and men, and all friction of whatsoever kind means waste. True, these historical sketches of character may not find exact parallels to-day, but history repeats itself under changed forms, and there is still as much difference in men's ruling powers as there is between some noisy old steam thrasher and a powerful engine which awes one by its silent force.

Perhaps the man who really makes the most of his men is somewhat of a rarity. Perhaps not. It is not easy to analyse his character, but its moral influence is plainly seen in the smooth running of the complex machinery of garden management. Each worker seems specially selected for the work he is best adapted to, and is perfect in it by long practice. He has, all unconsciously, perhaps, been made to feel that he fills an important part, and takes a consequent pride and pleasure from that innate sense of responsibility. Implicit trust and confidence imperceptibly grow under such a healthy regime into loyalty of service and devotion to the master's interests. Whip nor spur are needed to urge on in filling the want that occasional high pressure brings; men cheerfully rise responsive to the call; they will, as some have been heard to say, "do anything for such a master;" and for such men, honest, loyal, and true, a master will do all that lays in his power, and fear not any auditing of his labour bill, for a good balance to credit bears witness to his wise rule and economical management.

### The Seedsman's Bill.

*Prima facie* seed order sheets now supplied with catalogues are a boon and blessing to gardeners. No writing out of lists or poring over catalogues that "words of long length and thund'rous sound" should not disgrace our spelling. No troubling of troubled men, no bothering of bothered ones; jot down ones and twos, and so on, of quarts, ounces, packets, and so forth; sign your name, no more, the seedsman does the rest. Handy, however, as the seed list is, and innocent as it looks, it is neither guiltless of aiding and abetting big bills, nor wholly guilty of doing so. This is not fault-finding with our seed merchants, or need there be any suspicion of design to wound their *amour propre*. *Per contra*, it is possible to show that a little more attention paid to this subject would be better for all concerned. Ninety per cent. of complaints about seed germination lay in the fact that proper attention is not paid at that most critical period of a plant's existence—its birth from the embryo—for the simple reason that men handicap themselves by attempting too much and, consequently, accomplish too little. For instance, one of the craft yearly sowed nearly every delicate annual that is listed, and ten times the quantity he could possibly plant, supposing they were

all successfully raised and properly cared for. Why was it? "Oh! M' leddy juist marks doon a' the things she likes, then I mark doon a' the things I want, and de'il tak it—" Rising wrath stanch'd further speech, but the forefinger indexing some scores of pots, pans, and boxes; some with a label only (seeds bad, of course), others as crowded a crop as Mustard and Cress waiting for salvation in the shape of "pricking off," all sorts of congested life, spoke volumes to which the bill would probably add finis, for "M' leddy's vera pernicketty, and she's aye changing." An exceptional case! Granted; yet the same wretched system permeates many gardens in more or less degree.

Impatience defeats its object. Who has not seen complete failures of the great spring-sowing of Broccolis, and "sic like



*Senecio clivorum*.

One-third natural size.

greenies" through sowing too early! Two seasons ago another neighbour rushed round with his tale of woe. "Never a seed up, all failed; no Broccoli, no Cabbage, no Cauliflower, no nothing." He felt very sore; condemned the seedsman. But he felt sorer still when he saw a fine "hit" sown a month later with seeds supplied by the same firm. The best manager in other directions would need to be a miracle monger as well in order to show any balance to his credit. When guided by inclination, instead of governed by reason, men thus play fast and loose with the ethics of economy. So "bad seasons," "bad seeds," "employer's bad taste," anything, in fact, except gardeners' hobbies and the wildest of wild estimates of what is possible and what is impossible are pegs on which to hang every excuse as well as hang themselves. So, "Our remedies oft in ourselves do lie which we ascribe to heaven."—Quizz.





### Grapes Splitting.

This misfortune, for it can hardly come under the designation of disease, appears frequent enough in vineries to make it a cause worthy of investigation. I have given some consideration to the matter for the last few years—indeed, ever since the interesting discussion which took place in the *Journal* between the late Mr. Thomson and Mr. McIndoe. I have encountered not a few curious cases of “cracking” since then, and though in many of them some people would not hesitate to give a reason, yet I feel in the rather peculiar position of being yet “at sea” with regard to the real cause of this evil. I have not only observed the behaviour of Grapes, but also of other fruits, especially out of doors, and here also I am as yet quite unable to arrive at any satisfactory conclusions. I have also, as far as I know, read all that is worth knowing on the subject without faring much better. Probably many of your readers will think me “tremendous dull” in the understanding, which to me in this connection is a matter of no consequence. But to be more specific, I may say that I entertain no doubt that the exciting cause of Grape cracking is superabundant moisture. My difficulty comes in when I begin to inquire how, and in what manner, does this acknowledged general cause act in producing the disastrous effects? I learn this can take place in two ways: first, by endosmosis, and, again, by exosmosis. Can your many able readers throw more light on this mysterious question?—GRAPES.

### Wanted—Inventors.

Under the above heading you published in your issue of September 11 a most interesting article, which I am sure has met a responsive echo in the minds of many practical gardeners. I quite agree with your correspondent that inventors generally have let the garden severely alone in the way of new and time-saving appliances so far as public records go. It does not follow, however, that new methods have not been adopted in some places by men who have realised the necessity of handier and more useful implements. But the reason that they are not more widely known is not because they do not exist, but because the expense of putting them “on the market” is generally more than most gardeners can afford. Take my own case for instance. As head gardener, I have under my care several houses containing Orchids, stove, and greenhouse plants, Melons, Cucumbers, &c., and, as a natural consequence, occasion sometimes arises as how to adopt the best means to improve the various methods now in use, so as to bring about an improvement in the way of lightening labour. I have designed and have in use several useful appliances, such as an improved support for fruits of Melons; also a support for fruits growing in pits and frames. Another is a plant protector, very useful in the Melon and Cucumber houses during the earlier stages of the plants’ growth, when the Melon and Cucumber are so very liable to be attacked and often destroyed by slugs, snails, beetles, and woodlice. We have in use in the Orchid houses here a very useful invention, which insures perfect safety to the plants from the above-named foes. I may state that some of the supports and plant protectors are in use in the Royal Gardens, and have given entire satisfaction. There is no doubt, if one could afford the expense of taking out the necessary patent, and properly advertising these things, they would find a ready sale, and be found of great use to growers of these plants. But, sir, when I wrote to the “Patent Agents,” with the intention of taking out the necessary protections, I was startled to learn what their fees amounted to, besides having to prepare sundry drawings and specifications. The result was that, as my purse could not stand the strain, my “inventions” remain known only to myself and a few friends to whom I have shown them. I would suggest that you, sir, should obtain the services of an “expert,” who for a small fee would advise upon such matters, and thereby lend much-needed assistance to those in the same position as myself. If this is not possible, then, perhaps, you might in one or more articles tell us how to get the best and cheapest way to work, because I cannot but think that the fees demanded by the agent referred to represented to a great extent his own remuneration, and not the mere fees which any intending inventor would have to pay at the Patent Office.—JAS. BARKHAM, Longford Gardens, Havenstreet, I.W.

Mr. H. Muncey in your issue for September 11, furnishes an interesting article and calls for inventions dealing with gardens.

We are not quite so backward as he would suggest, as a perusal of some of the sundriesmen’s lists will show. “H. M.” desires an unbreakable pot. It is already in existence in the U.S.A., being made of papier-mache, and of a terra-cotta colour. However, they are only in small sizes, and mighty expensive at that. Regarding syringes, there can be no improvement, whilst retaining the size necessary to make it convenient to handle. The “Abol” is among the best of its kind, and the aerated sprayer is excellent for insecticides. One thing that requires improvement is the barrow, the greatest instrument of torture in the garden. Give to us a self-balancing, easy running barrow, and we will be thankful.—SQUIB.

[Our correspondent enclosed sketches suggestive of inventions, and these are: (1), a pneumatic-handled spade, with spring to neutralise any jarring effect, and a sliding grip. (2), a one-wheeled barrow (wheel in the centre) to relieve the weight on the trundler’s arms, the handles being placed above the wheel and worked by a lever so as to act either as legs or as handles, as the case required. There would be hooks beneath, for hanging things on when the barrow is full. (3), a broad-toothed rake, convertible into a hoe by slightly pulling out a rod at the side.—ED.]

### Gardeners and Good Manners.

Writing under the extended title, “One Reason why Gardeners should be Educated,” on page 249, your correspondent “Agnos” dilates in a very self-assured manner on the necessity of polish and a gentlemanly address as another essential to the equipment of a fitly trained head gardener. Granted that it is requisite that gardeners be cultured gentlemen, would it not be reasonable that employers who require men with a university form of speech should pay a relative wage and treat them as gentlemen? How many are there at this moment smarting under the injustice, and even cruelty, received at their hands? No amount of mental culture will produce a gentleman. It will but produce a corresponding amount of polish, through which the inner man may at any time break through. How comes it that we find labouring men with no manners as understood by the aristocrat, but with the instincts of gentlemen implanted deep in their moral fibre? If it were not so, such characters as George Elliot’s “Adam Bede,” one of the finest in fiction, would be an utter absurdity. On the other hand, we know only too well that the term nobility, while it may stand for refinement, as equally often, perhaps, means much that is vulgar, low, and degrading. The most elegant superstructure in the world, built on mental culture, is not to be compared to the meanest temple founded on the bed-rock of all real gentlemanly qualities—right principle, which is of the heart, not the intellect, and which is equally as much the birthright of the peasant as the sovereign. In the storm and stress of life the finer sensibilities may, perhaps, become blunter and dull, but never can the manhood be undermined which is so founded.—D. N.

“Agnos” remarks regarding uneducated gardeners are true to a great extent. Quite recently I overheard a garden boy, when questioned by his employer as to what he was doing, reply, “digging the spuds!” However, “Young Gardener” (page 292) should set to work to improve his “ignorance,” as he terms it. No one is past learning, and the educational books are legion. I am acquainted with a young gardener, who received a poor education yet in manners and speech is quite gentlemanly. Moreover, I feel convinced that he will push forward at a far more rapid rate than his prototypes who are too fond of the leaving-off time and sporting attractions. Without a doubt, the man who studies hard possesses a great pull over those who do not. The collegian may succeed more quickly in obtaining a head position, but the outsider may compete with him if he will only use his brains.—T. A. W.

### High Jinks in Ireland.

Referring to the query concerning the reproduction of a photograph of *Dracæna*, which appeared in your *Journal*, page 205, and also to the query by “Quiz” in the *Journal* of September 4, I am sorry I could not have answered sooner. I am obliged to “Quiz” for drawing my attention to the same. The plant in question, or, rather, photo of same, was not “australis,” but “Lindeni.” However, I am not quite sure, as the owner of the original plant has consigned it to the rubbish heap; therefore, I was led to compare the negative and print from same with the well known “Lindeni,” and the balance of evidence would name it “Lindeni,” so that I have made a mistake in naming it “australis.” But the fault of creeping into the avenue of error does not entitle “Quiz” to deduce the cause as of a bibulous condition. re his remarks: “Oh, it was rare old times, I hear, and what with ‘purty’ colleens hovering about, poteen flying around, and elegant Potatoes at sixpence per stone, small wonder that the littlest of little errors might creep into Irish correspondence.” I may as well state for “Quiz’s” benefit that the photograph was sent previous to these “high jinks,” and was likewise taken in

the earlier months of the year, so that "Quiz's" attempt at cheap sarcasm is utterly devoid of an atom of truth, and suggests a form of journalism that does not bear the impress of manly action. Personally, if I desire to ask a question, I should do so under my own name, certainly not under a nom de plume, as the latter course is suggestive of that questionable code of honour that prefers to stab your opponent in the dark than meet him in open combat.—A. O'NEILL.

### The Germination of Ferns.

Recent investigations by some German physiologists show that in the germination of the spores of Ferns, Horsetails, and Mosses, light is an essential factor. They are thus in contrast with the majority of plants, the seeds of which do not require light for the germinating process, or may even be impeded in growth by its effects. A few exceptions, however, occur amongst Ferns, where the absence of light makes no difference. Generally light acts as a stimulus, also it brings about certain chemical changes in the embryo. Within the spores of most Ferns and Mosses sufficient nutriment is lodged to enable them for a while to retain vitality, but the Horsetails, not possessing it, must germinate speedily or the spores die.—J. R. S. C.

### Apple, Peasgood's Nonsuch.

I am rather surprised to find that your esteemed correspondent Mr. W. J. Murphy (page 249), cannot succeed with the above-named Apple. A tree which only cost half-a-crown three years ago at the nursery, and which I planted here, is now bearing a crop of beautiful fruits, as it also did last year, and I know an old tree not many miles from here which bears some of the best specimens I have seen, and which have helped to win prizes at the Crystal Palace and at the local shows. I should advise Mr. Murphy to take the blossoms off the tree if he has not already done so, as they cannot do the tree any good, but probably some harm.—R. M., Babington, Bath.

### Red Spider on Vines.

On page 292 Mr. A. Jefferies, after a long silence, again takes up the above subject, and—to use a well-known metaphor of Dickens—he seems to be "swelling visibly" in contemplating his recent achievement in not being able to kill red spider after having vaporised with XL All at twenty-five times the usual strength. Mr. Jefferies asks me to explain how I managed to destroy similar insects so easily by the aid of XL All? Well, I do not believe in mere repetition; all I have to write about the matter I have already written in my previous communication. It would be quite easy for me to forward to the editor a few Vine leaves covered with red spiders, all quite dead, but that would prove nothing, as it seems that the "hardened criminals" in Essex are not caught—I mean killed—so easily.—H. D.

I do not wish to enter into the discussion between "H. D." and Mr. Jefferies on this all-important subject to gardeners, but I trust that the latter will pardon me for venturing to say that, excellent in detail as the description of the experiment made by him is, it lacks one most essential factor, viz., the state of the atmosphere of the pit, with respect to moisture, in which, and at the time, the experiment was made. When vapourising with nicotine compound, a comparatively dry atmosphere is absolutely necessary, and inattention to this factor frequently makes all the difference between success and failure. In making this statement I do not wish to infer that vapourising with XL All nicotine compound will destroy red spider in all its stages either by one strong, or what is far better and safer, repeated minor doses; but I do wish to emphasise the fact, that a given dose administered in a moist atmosphere containing 90 per cent. of moisture may prove ineffectual, whilst in one containing only 60 per cent. it will prove destructive to insect life.—T. CHALLIS.

We are still waiting in expectancy for that which is destined to be the greatest boon ever yet conferred on a gardener, a compound or article which is perfectly reliable and certain in its destructive powers against "insects," while equally perfect in its harmlessness to the most tender plants. XL All, mentioned by Mr. Jefferies on page 292, perhaps does not claim to be blameless further than others of the many eurative potions which exist for the relief of plant troubles. It, nevertheless, is among the best insect destroyers we yet possess. This we think few people who have given it a fair trial will feel prepared to dispute. But even with the oft-employed tobacco, we find red spider can stand a good deal of the fumes and still keep a steady foot and upright gait. To Adiantums, XL All is a disastrous foe, browning the young fronds in a very short time. It deals death readily and speedily to the green fly, but a few years ago we failed to get it serviceable in destroying fly in Chrysanthemum blooms. Fumi-

gate them as we would, still they lived. We then concluded that it was possible there might be bad XL All as well as bad whisky. Red spider is an extremely difficult insect to kill if once established, but is it not quite possible, if careful watch for its first appearance is kept, that this destructive little creature may cause little trouble? Preventives are better than remedies.—C.

### Murmurs from the Garden.

Men, of course, often say queer things, and some of those who say very much more than they think have recently been saying the following:—"That, notwithstanding the drain made on our young men by circumstances attaching to the late war, the gardening profession is still suffering from plethora. That nowadays there is a disposition on the part of our modern journeyman to shun the excellent training ground of the nurseries. This, if true, is a great mistake, for better time could not be spent than a short period in a first-class nursery. Gardeners should be well up in the culture and nomenclature of many of the ornamental trees and shrubs which furnish our pleasure grounds but, alas! they are not. The nursery is certainly the place for this. That because the summer and autumn were unkindly to plants and men, the winter is to follow suit by being very severe. We have personally not very much faith in prophecies, especially when connected with material so fickle as the weather. That it is quite possible the Chrysanthemum won't make so much noise as usual this year, because, first, the season was not the best possible, and again because the fateful 3rd of September occasioned a few broken 'heads' also the succeeding hard frost injured not a few. That gardening is not worth the candle, because everyone who earnestly desires to get a 'plum' doesn't get one. Well, the getting, no doubt, is a serious enough matter, but it is keeping it, that troubles one.—H.

### Societies.

#### R.H.S., Scientific Committee, September 23rd.

Present: Dr. M. C. Cooke (in the chair); Rev. W. Wilks, Messrs. G. Massee, Saunders, Holmes, Douglas, Dr. Rendle, and Dr. Masters.

*Diseased Helianthus*.—Stems of *Helianthus* exhibited were rotting at the base, and dying off in great numbers. Externally there were, here and there, traces of white mould, but when cut down longitudinally the pith was found to be occupied by numerous sclerotia similar and perhaps identical with those found in Potato haulms and Tomato stems, and appear to be quite sufficient to account for the dying off. This Potato disease is fully described in Worthington Smith's "Diseases of Field Crops," p. 15, and the life-history of the sclerotium given, in which it is shown that the ultimate development is a small *Peziza*, there called *Peziza postuma*, but undoubtedly the same as had previously been described as *Peziza Libertiana*, and more recently called *Sclerotinia Libertiana*, and by Massee as *Sclerotinia sclerotiorum* (see Massee's "Plant Diseases," p. 150, fig. 32). It seems to be found indiscriminately upon plants of various kinds, but commonly on Potato and Tomato, Chrysanthemum, Cucumber, Turnips, and Sunflowers.—M. C. C.

*Pear disease*.—The Pears sent to the last meeting, cracked, shrivelled, and blackened by the attacks of *Fusicladium pyrinum*. In no case could I find any evidence of the presence of the *Entomosporium*, which produces similar results. It is noteworthy that, intermixed with the *Fusicladium*, were found profusely the hyaline, curved, and septate conidia of some species of *Fusarium*, which certainly bears no relationship to the *Fusicladium*, and would be a distinct parasite. This requires further investigation, since many of the species of *Fusarium* are destructive parasites, and this has every appearance of being a new and undescribed species.—M. C. C.

*Leaf-spot of Celery*.—The leaves of Celery exhibited were spotted with somewhat orbicular bleached spots, at first brownish, and then whitened towards the centre. Scattered over these spots are the minute black dots which represent the perithecia, enclosing the sporules. These are not so numerous as in most other species, and the sporules are long and thread-like, oozing out in a tendril in damp weather (35–40x1–2μ). It is the same species which occurs on the leaves of Parsley, and is known as *Septoria petroselinii* (Desm.). It occurs also in France, Belgium, Germany, Italy, and South America.—M. C. C.

A vote of thanks was voted to Dr. Cooke by acclamation.

*Abnormal Pear*.—Rev. W. Wilks showed an instance of a fleshy fruit-like growth resulting from a double flower. The end of the flower-stalk in these cases becomes fleshy internally, but externally bears leaves in successive whorls one above another, like so many ealyees. No true fruit or seed is formed. The condition is not uncommon.

*Clubbing in Cabbages*.—Mr. Massee pointed out that if the seed bed were free from the pest, the soil dressed with gas lime, and if the seedling plants can be got over the first three weeks of



their life free from attack, there is no danger of subsequent infection.

*Chlorosis of Apple and Other Trees.*—In reference to this subject, discussed at the last meeting, Mr. Gaut now sent twigs of Apple trees and of Raspberries from a garden in Yorkshire, together with samples of the soil taken at a depth of 9in and 18in respectively. It was suggested that the samples be sent to the analyst to determine whether or no they contain copper.

*China Asters.*—Specimens of these plants, showing the symptoms so commonly met with, were referred to Dr. Cooke for report, the supposition being that the condition was due to the Aster-worm, described and figured in the "Gardener's Chronicle" by the Rev. H. Friend.

*Spot in Grapes.*—From Derby came specimens of Muscats affected with this fungus, now too commonly met with. It is due to a species of *Glæosporium*, often noticed in our columns, and also in Viala's work on the diseases of the Vine. Destruction by fire of the affected berries, so far as possible, and the use of a fungicide spray next season, are the only remedies that can be suggested.

*Distorted Apples.*—Some distorted fruits were shown, whose small size and crippled appearance were attributed to imperfect fertilisation and a check to growth.

*Callas.*—Some specimens from Rougham Hall were exhibited, in which the leaves had failed to expand properly. This was supposed to be due to some arrest of growth, the reason for which could not be ascertained without knowing all the circumstances under which the plants were grown.

*Canada Rice.*—Mr. Douglas showed a specimen of this annual Canadian grass, whose seeds are used as an article of food. A fine clump may be seen at Kew.

*Begonias.*—Mr. S. Brown, of Edwinston House Gardens, Newark, sent male flowers of tuberous Begonias in which the anthers had been replaced by stigmas, and the upper surfaces of the petals were covered with imperfect ovules. Such changes are common in cultivated Begonias.

*Chrysanthemum Leucanthemum.*—Dr. Masters showed a specimen in which stalked flower-heads proceeded from the axils of the leaves all up the stalk.

*Sweet Pea.*—The same gentleman showed flowers of Lady Grisel Hamilton from his garden, in which the base of the standard was deeply divided into two rounded lobes; almost all the flowers on the plant were thus affected, and some few on other varieties, so that it seemed as if this formation was, or if selected might be, a precursor of a separate race.

*Griselinia littoralis.*—Mr. Burbidge sent from Dublin a specimen of this New Zealand shrub, with small, ovoid, berry-like fruits, which are very rarely produced.

*Diseased Melons.*—In reference to the supposed bacterial disease of Melons referred to at the former meeting, Mr. Willard now sent the following letter, which confirms his original statement:—"Acting on your suggestion, I have tested inoculation still further. Two plants were selected that had finished their fruit off satisfactorily, and to all appearance were remaining healthy. The first had a hard woody stem; the sap of a diseased plant was introduced by a scratch in the bark, the next day discoloration took place, in three days the disease could be seen, and in a week the plant succumbed. In the case of the other, which was somewhat more succulent, the inoculation was done on Monday morning, and the plant was practically dead on the following Friday, the disease going right through the stem, and seemed to cut off the supply of sap from the root. I may add, these two plants had thick, healthy green leaves, more so than usual for plants that finish their fruit quite up to ripeness. The house has not been shaded, and the plants have had abundance of air during the day with a little left on at night.—J. WILLARD, Holly Lodge Gardens, Highgate, N., September 22, 1902."

### Bristol Gardeners' Association.

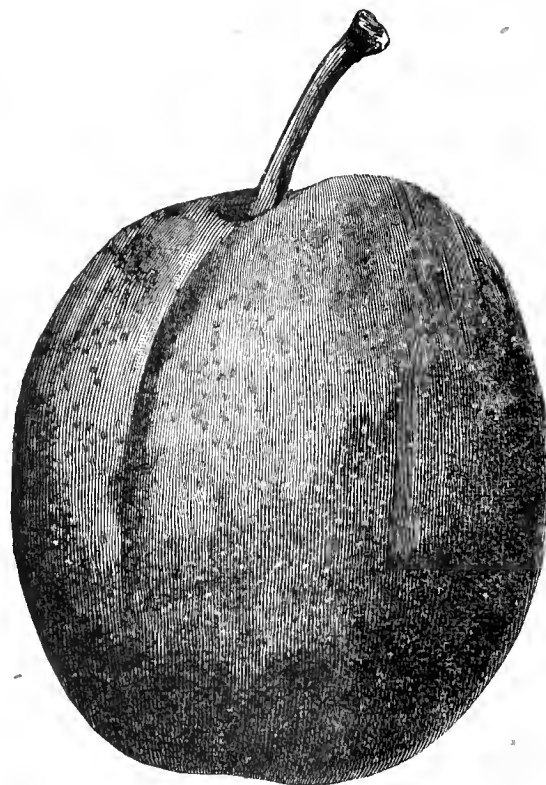
The summer session of this association was concluded on Thursday evening last, under the chairmanship of Mr. Binfield. Mr. Garnish, Staple Hill, provided the paper, his subject being "Bulb Culture," with which he dealt in a practical way, advising potting early for Christmas blooming, such as Hyacinths, Tulips, and Narcissus, and at intervals for successional blooms. He added that our gardens could be made most gay and pleasing if planted with Narcissus, Tulips, and others, blooming as they did when flowers were so scarce. His paper was a very interesting one, and he was cordially thanked. Prizes for collections of Apples and Pears were awarded to (first) Mr. J. B. Brain (gardener, Mr. Atwell); (second) Mr. Bruce Coles (gardener, Mr. Lee); and (third) to Mr. J. Chetwood Aiken (gardener, Mr. Clarke), all three exhibits being exceptionally good. For three sections of honey the prizes went to Mr. A. Baker (gardener, Mr. Orchard), Mr. Mills Baker (gardener, Mr. Board), and Mr. Chas. Wills (gardener, Mr. Shewring), respectively. Certificates of merit were awarded to Mr. A. Baker (gardener, Mr. Orchard), for a basket of Peaches, and to Sir Herbert Ashman (gardener, Mr. Shorland) for two *Kochia scoparia*. A special certificate was recommended for Lady Cave (gardener, Mr. Poole, F.R.H.S.), for a good collection of Plums.

### National Dahlia Society, Sept. 23rd.

First Class Certificates awarded to the following New Cactus Dahlias:—Manxman, from Mrs. S. Mortimer; Mrs. Seagrave, Mrs. W. Cuthbertson, Charm, Minnie West, all from Mr. J. T. West; Princess, from Keynes, Williams, and Co.; Coronation, do.; H. F. Robertson, Mabel Tulloch, F. H. Chapman, from Messrs. J. Stredwick and Son; Decima, Ella, and Albion, from Messrs. J. Burrell and Co.; also Show Dahlia, A. M. Burnie, from Mrs. St. Pierre Harris; Pompon Meplisto, from Mr. C. Turner, and Imogene, do.; single Serita, from Messrs. J. Cheal and Sons.—J. F. HUDSON, Hon. Secretary.

### PLUM, RIVERS' PRIMATE.

This handsome kitchen Plum was raised at Sawbridgeworth, and received an Award of Merit on 11th of October, 1898.



Plum, Rivers' Primate.

In Messrs. Rivers' catalogue it is described thus: "Very large; skin, bright purplish red, with a bright bloom, thickly spotted with small dots; juicy; a freestone. Will hang on the tree until the middle, or end of October." The late Mr. T. Francis Rivers, the raiser, wrote to the *Journal of Horticulture* regarding this and other varieties, as follows: "This is a valuable Plum for market, and, like the Monarch, is also well adapted for drying. October is gradually being furnished with good Plums. For dessert we have Reine Claude de Bavay, Late Transparent, Grand Duke, Late Orange, and Coe's Golden Drop; and for the kitchen, Monarch, Primate, Wyedale, Late Orleans, and September Beauty."

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.                   | Direction of<br>Wind. | Temperature of the<br>Air. |              |              |              | Rain.       | Temperature of<br>the Soil.<br>At 9 A.M. |                      |                      | Lowest<br>Temperature<br>on Grass. |
|-------------------------|-----------------------|----------------------------|--------------|--------------|--------------|-------------|--|----------------------|----------------------|------------------------------------|
| 1902.<br><br>September. |                       | At 9 A.M.                  |              | Day.         | Night        |             | At<br>1-ft.<br>deep.                     | At<br>2-ft.<br>deep. | At<br>4-ft.<br>deep. |                                    |
|                         |                       | Dry<br>Bulb.               | Wet<br>Bulb. | Highest.     | Lowest.      |             |  |                      |                      |                                    |
|                         |                       |                            |              |              |              |             |  |                      |                      |                                    |
| Sunday ...21            | S.E.                  | deg.<br>58.6               | deg.<br>53.2 | deg.<br>66.5 | deg.<br>49.0 | Ins.<br>—   | deg.<br>54.8                             | deg.<br>56.2         | deg.<br>57.0         | deg.<br>39.7                       |
| Monday ...22            | S.E.                  | 63.2                       | 57.8         | 75.2         | 54.2         | —           | 56.0                                     | 56.3                 | 57.0                 | 44.8                               |
| Tuesday ...23           | E.S.E.                | 62.2                       | 56.2         | 69.2         | 56.8         | —           | 57.3                                     | 56.8                 | 56.8                 | 45.2                               |
| Wed'sday 24             | N.N.W.                | 57.1                       | 53.0         | 66.0         | 49.3         | —           | 57.8                                     | 57.2                 | 56.8                 | 39.3                               |
| Thursday 25             | S.W.                  | 56.2                       | 49.8         | 65.0         | 39.0         | —           | 56.2                                     | 57.3                 | 56.8                 | 29.2                               |
| Friday ...26            | S.E.                  | 43.8                       | 43.6         | 66.4         | 40.3         | —           | 55.0                                     | 56.9                 | 56.7                 | 31.4                               |
| Saturday 27             | S.E.                  | 46.1                       | 45.9         | 67.0         | 39.8         | —           | 54.0                                     | 56.3                 | 56.6                 | 31.0                               |
| MEANS ...               |                       | 55.3                       | 51.4         | 67.9         | 46.9         | Total.<br>— | 55.9                                     | 56.7                 | 56.8                 | 37.2                               |

The early mornings have been misty and cold, the days fine, bright and warm.

### Trade Catalogues Received.

H. Cannell & Sons, Swanley, Kent.—*Autumn Catalogue.*  
W. Fromow & Sons, Chiswick.—*Bulbs.*  
William Paul & Son, Waltham Cross, Herts.—(1) *Roses*; (2) *Hardy Trees and Shrubs, and Herbaceous Plants.*  
Perry's Hardy Plant Farm, Winchmore Hill, London, N.—*Bulbs.*  
André Schwartz, Rosarian, 238, Grand Rue de Montplaisir, Lyons.—*Roses.*  
L. Späth, Baumschulenweg, Berlin.—*Fruit Trees, Roses, Shrubs.*  
William Watson & Sons, Clontarf Nurseries, Dublin.—*Carnations.*



### Hardy Fruit Garden.

**GATHERING FRUIT.**—Another substantial addition may now be made to the quantity of fruit in store, completely clearing the trees of those varieties of Apples and Pears which should now have matured well. The latest may hang until they are more fully advanced towards ripening. Premature gathering is detrimental to their keeping in good condition for a lengthened period. They probably would not decay, but they are liable to shrivel, and gain no flavour. The late varieties, both of Apples and Pears, are of hardy texture, and will not suffer from a few slight frosts. With careful picking and storing a large percentage of the fruit will keep well, examining them occasionally for defective specimens, which remove. The early varieties now in store must be more frequently inspected, as being softer in texture they are more liable to decay.

**COB NUTS AND FILBERTS.**—On the nuts becoming quite ripe they are readily gathered from the trees or bushes. Before placing them, however, in store, it is necessary to thoroughly dry the husks. Lay the nuts thinly in a dry airy place under glass for some days, turning them over frequently. They may then be stored in a cool, dry room. After the leaves fall, suckers from old plants may be dug up, and planted to form fresh plantations.

**RENOVATING WALL TREES.**—After the clearance of fruit from the trees, no better opportunity can be chosen to examine thoroughly the branches and spurs of the various forms of fruit trees. Spurs may be elongated, and the branches too thickly placed. Elongated or distorted spurs are caused by the crowding of the branches. The removal of all branches that are nearer together than a foot is desirable now. The spurs may be gradually thinned out, and shortened as opportunity permits throughout the winter and early spring. Where quite a large number of branches require removal, it will be better not to attempt them all in one season, as too severe amputation is likely to be detrimental. Pare cuts smoothly. In the case of fan-shaped trees, a re-arrangement of the principal branches may be effected, and, in doing so, cut out those weak and exhausted.

**ROOT-PRUNING.**—Carrying out a judicious system of root-pruning is an excellent manner of bringing fruit trees into a bearing condition. The luxuriance which is fatal, is where trees make long and strong growths, form large leaves, and do not produce or properly perfect fruit spurs. The real cause usually lies at the roots; these, instead of being present in dense fibrous masses, are more in the nature of long and strong, thick roots, which have a greater tendency to grow straight downwards than in any other way. The object of root-pruning is to alter the character of these roots, which can be effected by shortening them, thus giving them a check, and inducing them to put forth their vigour in a greater number of smaller roots. When root-pruning is decided upon, it is wise not to carry it out too severely, therefore, in the majority of cases only operate on one side of a tree in any one season. A trench, not less than 3ft from the bole, should be excavated. The strong roots found should be cut smoothly at the side of the trench. Go down low enough to see whether there are any strong, descending roots. If so, one or more of these may be severed, leaving the ends perfectly smooth, not jagged or split, for by this care only can fibrous roots be expected to push. Where it is possible to lift the roots and place them horizontally, do so, as a more fruitful condition of the trees will ultimately be ensured if the roots can be induced to ramify and multiply near the surface. The lowest descending roots cannot be so readily raised, but the higher roots may. In filling in the soil again, which may consist of the staple material taken out, with the addition of some substantial loam, mixed with a little bonemeal and wood ashes, work it well round the roots, and make it firm. The fibrous roots found in the course of excavation should be carefully placed on one side, and laid out horizontally to their full extent. Mulch the surface with light, flaky manure.

**SOIL PREPARATION FOR FRUIT TREES.**—As the planting season is fast approaching it is necessary to prepare the proposed sites for planting trees and bushes. In all cases, deep cultivation should be practised, taking pains to thoroughly break up the soil to a good depth. With the exception of Gooseberries and Currants, Raspberries and Blackberries, manure should not be introduced, for rich soil induces Apples, Pears, Plums, and Cherries to make strong and unfruitful wood. In breaking up the soil do so to a depth of 2ft, and manage so as to keep the spits of soil in their same relative position, for it so happens that the best soil lies usually near the surface.

**STRAWBERRIES.**—A final planting of young, well rooted specimens should be made. These can be obtained from between the rows of established Strawberries, reserving promising young plants when clearing the beds of weeds and runners. Small plants, too, which have been rooted in special beds, will, with good treatment have become strong and abundantly furnished with roots, and should lift with compact balls of soil attached. Plant firmly in rows 2ft apart. All plants for forming new beds ought to be secured from good fruiting plants, as it is unsafe to use any from a fruitless source. Newly procured varieties of Strawberries are necessarily not furnished with soil to the roots. Spread out the fibres on small mounds of soil, and cover carefully so as to give them a good start.—EAST KENT.

### Fruit Forcing.

**CHERRY HOUSE.**—Where light, airy, and well-heated lean-to or three-quarter span-roofed houses are available, and these face the south, Cherries can be had with certainty early in April, and are then welcome additions to the dessert. The trees may be either in pots or planted out. By the first of these methods the trees can be removed as soon as the fruit is gathered and the wood sufficiently matured, to a sheltered, sunny situation outdoors, and the house is then at liberty for growing Cucumbers, Melons, or Tomatoes, which, from a remunerative point of view, are quite as good an investment as the Cherries. On the planting-out system finer fruit is had, the growths being trained 9 to 12in from the glass, but it is necessary to have the roof lights moveable, and the house can only be used for the Cherries. If it is intended to plant any trees it should be seen to as soon as the leaves commence falling. Cherries thrive best in calcareous gravelly or sandy soils, but for trees under glass the compost is preferably rather strong, especially when the loam contains a free admixture of calcareous or flinty particles. Turfy loam, with a sixth of old mortar rubbish, and a similar proportion of road scrapings, will grow Cherries well. If the soil be light, add a fourth of dry marl, dried and powdered fine. Provide a drain of 3 or 4in pipes, having due fall and sure outlet. There should also be 9in depth of brickbats or rubble for drainage, the roughest at the bottom, with the material diminishing in size upwards to that of road metal, and on this place 3in thickness of old mortar rubbish, being careful to have it free from pieces of wood. A depth of 24in of border is ample, and 6ft width will meet the requirements of trees grown under glass. The compost should be placed together firmly. Early Rivers, Governor Wood, Black Tartarian, and Elton are excellent varieties, both for size and quality. The lights having been removed, they need not be replaced for six or eight weeks, the old surface soil being removed without injury to the roots, and fresh compost supplied, that above named answering with the addition of a fourth of well-decayed manure.

**TREES IN POTS** required to be drifted into larger sizes should be attended to at once, and those not needing such treatment may be turned out of pots, removing a few inches from the base, cutting back the roots, supplying fresh loam, adding old mortar rubbish, if not calcareous, with a fourth of decayed manure, and providing good drainage. Remove the surface soil in other cases as well as the last named, and supply fresh loam duly enriched, making quite firm. Afford a good watering, and place the trees in a position where they can have abundance of air.

**VINES—EARLIEST FORCED IN POTS.**—For affording ripe Grapes at the end of March or early in April, well-ripened canes from cut-backs started early in the year are most suitable, they being as stout as walking sticks, short-jointed, brown and hard, with eyes like nuts. They should now be at rest, have had the laterals cut off close, and the cane shortened to the length required, 6 to 8ft. The Vines do best in a lean-to or three-quarter span-roof house, and preferably with a pit along the front of 3 or 4ft depth for holding leaves, there being a pathway at the back, and a trellis for training the growths at a foot distance from the glass. A good start is assured if bottom heat can be provided, a bed of fermenting material two parts, two parts leaves and one part stable litter, affording a mild, lasting heat. Place loose brick pillars, 9in square, about 2½ft apart, for the pots to stand on, and so high that the rims of the pots are level with the top of the fermenting bed. The material must be brought off loosely about the pots in the first instance, and not have a temperature of more than 65 or 70deg at the commencement. Vines that have ripened early, been pruned, and had six weeks' rest, may be started at once for supplying fresh ripe thin-skinned Grapes as early in the year as possible, which cannot well be effected before March, and to effect this the earliest varieties, as White Frontignan, Foster's Seedling, Black Hamburgh, and Madresfield Court should be chosen. The temperature at starting should be 55deg by artificial means, and when the buds show signs of breaking it may gradually be increased to 65deg. The canes should be slung in a horizontal position, or lower at their extremities than the base, to induce them to push their buds evenly throughout the length of the canes, syringing them two or three times a day, also the paths and



walls. Sufficient water must be given at the roots to keep the soil moderately moist whilst the Vines are inactive, and only evenly so after they start, but when in free growth they need liberal supplies of nourishing food in liquid form, preferably alternating with supplies of water.

**EARLY FORCED PLANTED-OUT VINES.**—The Vines intended to be started early in December for supplying Grapes in late April or early in May should be pruned at once, so as to allow them some weeks' rest before starting. The Vines must be thoroughly washed with a tepid soapy solution, merely removing any loose bark without interfering with the live wood or bark, as harbour of this kind is favourable to the hibernation of red spider, mealy bug, and thrips, following with an approved insecticide. Where the roots have the run of outside borders it will be advisable to prepare some fermenting material for placing on that part after the Vines are started, the border in the meantime being protected from heavy rains by spare lights. Two-thirds of Oak or Beech leaves to one of fresh stable litter thrown into a heap and turned over once or twice, moistening if necessary, will afford a durable heat and source of nutrition. These materials will require renewal from time to time, and if this cannot be effected, it is better to dispense with any at the beginning, only such protection of leaves and litter must be provided as to prevent the soil becoming frozen in the severest weather. Thoroughly cleanse the house, everything being put into proper order, and keep as cool as consistent with the safety of the Vines.—ST. ALBANS.

### THE COLLARET DAHLIA.

A new type of Dahlia has come into existence. It has been named "the collaret" form, and first was brought to notice by Messrs. H. Cannell and Sons, Swanley, Kent, from whom we kindly received the small illustration of a flower of this race. This new class possesses, round the ordinary yellow disc, a series of stalked appendices of a collaret form, producing a great ornamental effect. The engraving gives a good idea of its nature. The colours are somewhat limited at present, but in the course of another season or so, the variation of tints will be very much increased, and the formation of the remarkable collaret growth more accentuated. The original plants have already been awarded Gold Medals and Certificates at various important exhibitions. President Viger is the best-known variety, with large, circular flowers, on stiff footstalks of a reddish carmine colour, with a smaller collar of pure white florets; very distinct and effective. Joseph Goujon is another collaret, producing flowers a trifle larger than the above, of a bright reddish scarlet, the collar florets being yellow, slightly marked red. Either plants or seeds of these can be secured, and as there may be a future for this race, it is probable that many growers will obtain plants to form a beginning with them.

### TRADE NOTES.

#### "Bitter Oil" Insecticide.

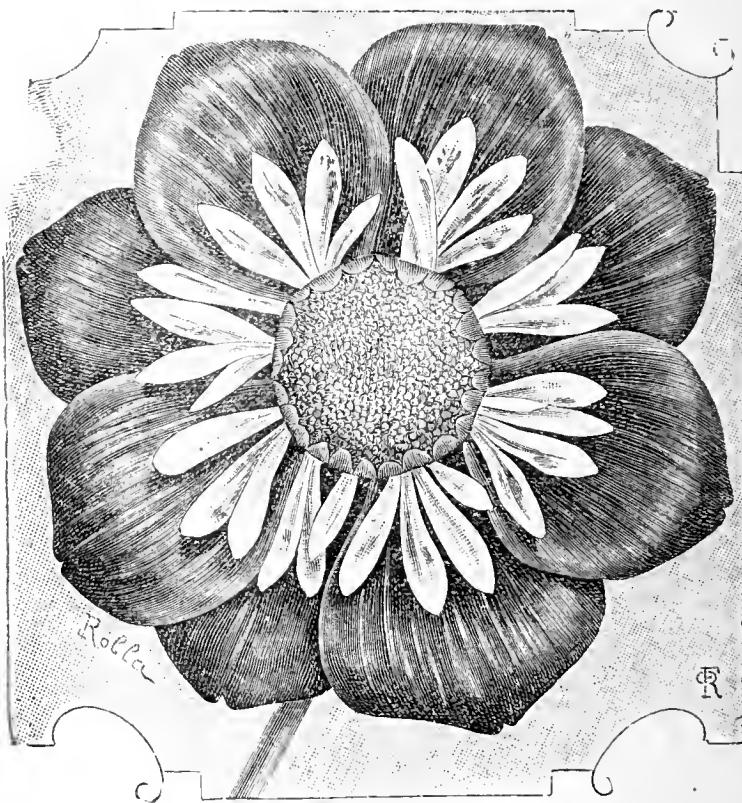
If it were not for the attacks of vegetable parasites and of insect depredators, the gardener's task would be inestimably lightened. But these destroyers or hinderers of his labour most emphatically exist. It is, therefore, advisable to employ and to test the efficacy of insecticides such as those prepared by responsible firms who have devoted studious attention to the subject. It is in order to bring to notice the bitter-oil insecticide that we pen this paragraph. The oil itself we are about to test, and have received from the Hull Chemical Works, Limited, a half-gallon tin for the purpose. Their "plant-cleanser" is also sent to us in the same size of tin. A friend of ours with whom we communicated regarding the use and effect of this insecticide has been kind enough to forward the following letter:—"On Friday last I visited a fruit-grower in my neighbourhood to inspect particularly some Apple trees. Two trees when in full blossom were dressed with Bitter-Oil for the purpose of preventing ravages of the codlin moth. We examined the trees carefully, and couldn't find any diseased fruit, and I send you a sample of the fruit gathered on Friday. The grower informed me that last year these two trees had heavy crops, but not only were the Apples absolutely unsaleable, but couldn't be used in his own house, and were given to the pigs. He also drew my attention to the clean and healthy appearance of the trees compared with those which had not been dressed." It only remains for us meanwhile to add that the Apples were safely received, and that they were perfectly clean, juicy, and healthy samples.



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**DAHLIA, F. W. WELLESLEY (J. Allen).**—This new Cactus variety is one of the finest seen during the current season. In our issue of August 21, on page 182, we described thus: "A rich crimson Cactus variety of large size, and beautifully narrow fluted petals; good in form." An Award of Merit was bestowed by the R.H.S. The raiser's name and address is Mr. H. Shoesmith, Claremont Nursery, Woking, Surrey.

**RANUNCULUSES FROM SEED (Amateur).**—Keep the seeds you have saved in a dry cool place. Early in spring mix a compost of strong loam and leaf mould, and fill some boxes or seed pans, well drained, very nearly full; sift a portion of it and place a thin layer over the rough compost, and press it very gently down. Mix the seed with some fine soil, rubbing the seed and the soil well together till the seeds are separated from each other. Sow this mixture upon the soil in the boxes or shallow pans; press it down level, and with a fine sieve sift some of the compost



Collaret Dahlia, President Viger.

evenly over it the thickness of a shilling: then with a watering pot, the nozzle of which has the finest holes, give a gentle watering. Place the seed pans under glass in a cold frame or pit, or in front of a low wall facing the east, and contrive a covering or shelter of some kind to protect them from heavy showers. Whenever the soil appears dry give water with the fine-rosed water pot, and in strong sunshine place a shade over them till the seedlings appear above ground and have attained a leaf or two to each plant. Search well about where the boxes or seed pans stand, and even lift them up and examine under them to see if any slugs or woodlice have crept there to hide themselves. Continue this attention till the leaves begin to decay and then cease watering, but keep the plants clear of weeds. When the leaves are all decayed and winter is approaching place the pans of seedlings in some very cool place where no rain can fall upon them, and keep them there till spring. About the middle of April bring them out and give them a good watering. Sift over the soil a thin layer of fresh compost, and repeat the care and attention with regard to watering, looking after insects, and keeping clear of weeds as in the previous season. This second year, when the leaves fall and the plants are at rest, the tubers will have attained some size. They should now be taken out of the soil, and the surest way to accomplish this without losing any roots is to sift the upper part of the soil through a fine sieve, fine enough to catch even the smallest roots. Store them away in a cool dry room, and in the spring plant them out.

**ANONA, PURPLE INSIDE (J. D. A.).**—We can assign no reason other than you may have been feeding the plants more liberally than usual. Doubtless the colouring has no material ill effect.

**GROWING PELARGONIUMS PLANTED OUT IN HOUSES FOR CUT BLOOM (Ninga).**—Beyond making the soil firm we do not know of any other method of keeping the wood within bounds, this securing, with due space for development and stopping irregular growths, sturdy growth in the plants and fine trusses of bloom. It is usual to cut the plants hard back after they have produced their wealth of bloom in the spring and early summer, so as to secure a good plant by about September, when they will bloom in a light house with a temperature of 50deg to 55deg by day and the atmosphere always on the dry side. Young plants should be stopped once or twice to encourage a compact habit, care being always taken to pinch to a joint at which is situated a growing bud. The plants are probably best from cuttings inserted the previous autumn or early in spring, and the plants obtained should be grown on throughout the summer, and not allowed to flower until, say, about September. A light, airy house or pit with a warm, fairly dry, atmosphere, will be the best situation from the time the plants are rooted until about midsummer, when they should be placed on a bed of coal ashes in the open air, or in a shallow pit with the lights removed. This plan is adopted in order that the growth may be short-jointed and become well ripened by autumn.

**MARIE LOUISE VIOLET LEAVES TURNING YELLOW (J. P.).**—The plants are suffering from a deficiency of nitrogenous matter, and possibly also of iron, being in the condition known as chlorosis, and is not unusual to the Neapolitan varieties on limestone soils. The plants appear to have been very loosely planted, the soil falling away from the roots without handling. It was sweet and good, but contained a considerable amount of lime. Had the soil been firmer the plants would have made a sturdier growth and larger leaves, though this would have been an advantage in helping to retain colour, yet the poverty of the soil is clearly accountable for the foliage being so pale. Another season we should manure the ground heavily, and if you can command it work in some leaf mould, making the ground quite firm before planting, and in summer mulch the whole border with short about half-spent manure. It would also be advisable to give a few sprinklings of soot, say a peck per rod, which would improve the colour of the leaves as well as otherwise contribute to the health of the plants. As you are about to place the plants in frames it would be desirable to plant in good rich soil, they doing capitally with leaf mould mixed with it, and the plants may be watered with soot water, but keeping it off the foliage and flower buds. If you would like to try the effect of sulphate of iron, you may sprinkle it on the soil before planting in the frame at the rate of a quarter-ounce per square yard, finely powdered before application. It should be kept off the plants.

**NAMES OF PLANTS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (J. C.).—1, *Helianthus giganteus*; 2, *Helianthus rigidus*; 3, *Echinops sphærocephalus*; 4, *Geranium sanguineum*; 5, *Clematis integrifolia*. (J. M.).—1, *Cassia corymbosa*; 2, probably *Ficus repens variegata*, but we are unable to identify such a mere scrap with certainty; 3, *Adiantum trapeziforme* var. *Catharinæ*; 4, *Adiantum Paccottii*; 5, *Codiaeum (Croton) pictum* var.; 6, *Codiaeum*, Mrs. Swan. (Journeyman).—A Liliaceous plant, but not identified from the piece sent. (W. Brown).—*Mimulus cardinalis*, a capital plant for spring flowering in pots, or for beds in the summer. It is easily cultivated. (J. B.).—1, *Betula urticifolia*; 2, *Betula nigra*; 3, *Betula alba lentæ*. (F. N.).—1, *Begonia margaritacea*; 2, *B. sanguinea*; 3, *Hoya imperialis*.

**NAMES OF FRUITS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (J. G.).—1, *Duchesse d'Angoulême*; 2, *Capsheaf*; 3, *Deux Sœurs*; 4, *Calebasse Grosse*; 5, *Marie Louise d'Uccle*; 6, *Beurré Superfin*. (J. Petts).—26, *Brabant Bellefleur*; 30, *Cellini Pippin*; 31, *Emperor Alexander*; 32, *Stoke Pippin*.

## Covent Garden Market.—October 1st.

### Average Wholesale Prices.—Fruit.

|                          | s. d. | s. d.  |                          | s. d. | s. d.   |
|--------------------------|-------|--------|--------------------------|-------|---------|
| Apples, English, dessert |       |        | Lemons, Messina, case    | 12 0  | to 20 0 |
| ½-sieve ...              | 4 0   | to 6 0 | " Naples " ...           | 25 0  | 0 0     |
| " culinary, bush.        | 3 0   | 5 0    | Melons, each ...         | 1 0   | 1 6     |
| Bananas ...              | 8 0   | 12 0   | Nectarines, doz. ...     | 3 0   | 6 0     |
| Damsons, ½-sieve ...     | 4 0   | 5 0    | Oranges, case ...        | 16 0  | 21 0    |
| Figs, green, doz. ...    | 2 0   | 4 0    | Peaches, doz. ...        | 3 0   | 6 0     |
| Filberts, lb. ...        | 0 3½  | 0 4    | Pears, Williams, ½-sieve | 4 0   | 6 0     |
| Grapes, Hamburgh, lb.    | 0 9   | 1 6    | " Hazels, ½-sieve ...    | 3 0   | 4 0     |
| " Muscat ...             | 1 0   | 3 0    | Pines, St. Michael's,    |       |         |
| " Alicante ...           | 0 9   | 1 6    | each ...                 | 2 6   | 5 0     |
| " Colman ...             | 0 9   | 1 6    | Plums, ½-sieve ...       | 3 0   | 4 0     |

### Average Wholesale Prices.—Vegetables.

|                         | s. d. | s. d.  |                        | s. d. | s. d.  |
|-------------------------|-------|--------|------------------------|-------|--------|
| Artichokes, green, doz. | 2 0   | to 3 0 | Lettuce, Cabbage, doz. | 0 6   | to 0 0 |
| " Jerusalem, sieve      | 1 6   | 0 0    | " Cos, doz. ...        | 6 0   | 0 9    |
| Batavia, doz. ...       | 2 0   | 0 0    | Marrows, doz. ...      | 1 0   | 0 0    |
| Beans, Scarlet Runner,  |       |        | Mint, doz. bun. ...    | 4 0   | 0 0    |
| bushel ...              | 1 6   | 2 0    | Mushrooms, forced, lb. | 0 8   | 0 0    |
| Beet, red, doz. ...     | 0 6   | 0 0    | Mustard & Cress, pint. | 0 2   | 0 0    |
| Cabbages, tally ...     | 3 0   | 0 0    | Onions, bushel ...     | 3 0   | 4 0    |
| Carrots, new, bun. ...  | 0 2   | 0 0    | Parsley, doz. bnchs.   | 2 0   | 0 0    |
| Cauliflowers, doz. ...  | 1 6   | 2 0    | Peas, blue, bushel ... | 0 0   | 4 0    |
| Corn Salad, strike ...  | 1 0   | 1 3    | Potatoes, cwt. ...     | 3 0   | 5 0    |
| Cucumbers doz. ...      | 2 6   | 4 0    | Radishes, doz. ...     | 1 0   | 0 0    |
| Endive, doz. ...        | 1 6   | 0 0    | Spinach, bush. ...     | 2 0   | 0 0    |
| Herbs, bunch ...        | 0 2   | 0 0    | Tomatoes, English, lb. | 0 4   | 0 0    |
| Horseradish, bunch ...  | 2 6   | 0 0    | " Jersey ...           | 0 0   | 0 3    |
| Leeks, bunch ...        | 0 1½  | 0 2    | Turnips, bnch. ...     | 0 2   | 0 3    |

### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                         | s. d. | s. d.   |                           | s. d. | s. d.   |
|-------------------------|-------|---------|---------------------------|-------|---------|
| Aralias, doz. ...       | 5 0   | to 12 0 | Ficus elastica, doz. ...  | 9 0   | to 12 0 |
| Araucaria, doz. ...     | 12 0  | 30 0    | Foliage plants, var. each | 1 0   | 5 0     |
| Aspidistra, doz. ...    | 18 0  | 36 0    | Grevilleas, 48's, doz.    | 5 0   | 0 0     |
| Chrysanthemums ...      | 6 0   | 12 0    | Lycopodiums, doz. ...     | 3 0   | 0 0     |
| Crotons, doz. ...       | 18 0  | 30 0    | Marguerite Daisy, doz.    | 4 0   | 6 0     |
| Cyperus alternifolius   |       |         | Myrtles, doz. ...         | 6 0   | 9 6     |
| doz. ...                | 4 0   | 5 0     | Palms, in var., doz. ...  | 15 0  | 30 0    |
| Dracena, var., doz. ... | 12 0  | 30 0    | " specimens ...           | 21 0  | 63 0    |
| " viridis, doz. ...     | 9 0   | 18 0    | Pandanus Veitchi, 48's,   |       |         |
| Erica gracilis ...      | 8 0   | 9 0     | doz. ...                  | 24 0  | 30 0    |
| Ferns, var., doz. ...   | 4 0   | 18 0    | Shrubs, in pots ...       | 4 0   | 6 0     |
| " small, 100 ...        | 10 0  | 16 0    | Solanums ...              | 5 0   | 8 0     |

### Average Wholesale Prices.—Cut Flowers

|                           | s. d. | s. d.  |                          | s. d. | s. d.   |
|---------------------------|-------|--------|--------------------------|-------|---------|
| Arums, doz. ...           | 3 0   | to 0 0 | Lily of Valley, 12 bnchs | 12 0  | to 18 0 |
| Asparagus, Fern, bnch.    | 1 0   | 2 0    | Maidenhair Fern, doz.    |       |         |
| Bouvardia, coloured,      |       |        | bnchs. ...               | 5 0   | 6 0     |
| doz. bunches ...          | 6 0   | 0 0    | Marguerites, white,      |       |         |
| Carnations, 12 blooms     | 0 0   | 1 0    | doz. bnchs. ...          | 2 0   | 0 0     |
| Cattleyas, doz. ...       | 0 0   | 12 0   | " yellow, doz. bnchs.    | 1 0   | 0 0     |
| Chrysanthemums, doz.      |       |        | Myrtle, English, per     |       |         |
| bun. ...                  | 3 0   | 4 0    | bunch ...                | 0 6   | 0 0     |
| " doz. blooms             | 1 0   | 1 6    | Odontoglossums ...       | 4 0   | 0 0     |
| Croton foliage, bun. ...  | 0 9   | 1 0    | Orange blossom, bunch    | 2 0   | 0 0     |
| Cycas leaves, each ...    | 0 9   | 1 6    | Roses, Niphetos, white,  |       |         |
| Cypripediums, doz. ...    | 2 0   | 3 0    | doz. ...                 | 1 0   | 2 0     |
| Eucharis, doz. ...        | 1 6   | 2 0    | " pink, doz. ...         | 2 0   | 0 0     |
| Gardenias, doz. ...       | 2 0   | 0 0    | " yellow, doz. (Perles)  | 1 0   | 1 6     |
| Geranium, scarlet, doz.   |       |        | " Generals ...           | 0 5   | 0 6     |
| bnchs. ...                | 4 0   | 0 0    | Smilax, bunch ...        | 2 6   | 0 0     |
| Ivy leaves, doz. bun. ... | 1 6   | 0 0    | Stephanotis, doz. pips   | 2 6   | 3 0     |
| Lilium Harris ...         | 2 0   | 2 6    | Stock, double, white,    |       |         |
| " lancifolium alb.        | 1 6   | 0 0    | doz. bun. ...            | 2 0   | 3 0     |
| " l. rubrum ...           | 1 0   | 0 0    | Tuberose, dozen ...      | 0 3   | 0 4     |
| " longiflorum ...         | 2 0   | 3 0    | Violets, doz. bun. ...   | 1 6   | 2 0     |



## Nature Studies.

And Nature, the old nurse, took  
The child upon her knee,  
Saying, "Here is a story book  
Thy Father hath written for thee.  
"Come, wander with me," she said,  
"In regions yet untrod,  
And read what is still unread  
In the manuscripts of God."  
And he wandered away and away  
With Nature, the dear old nurse,  
Who sang to him night and day  
The rhymes of the Universe.

We believe Longfellow wrote these lines, having in his mind that great Swiss savant Agaseing, who, with the inquiring spirit that ever seeks for truth, penetrated deep into the hidden things of Nature, and yet, with the humility of a little child, considered that his knowledge was but of the slightest. So it is with the wisest. Their very wisdom shows them the depth of their own ignorance. It is only the ignorant that are confidently certain about anything.

We are only just beginning to realise the difficulties that beset the path of those who would educate the masses.



Allowed that our manners are faulty, and that we concede at once, the next difficulty is that the masses just get a crumb of knowledge and then turn round and challenge the whole world of learning. We cannot compel them to a longer course, and they do not get enough to make them value more. They will strive possibly after out of the way "subjects" that are good in themselves, but of no practical value in the daily life of the would-be learner. The text book system seems to be the main thing. Outline work instead of deep research. That is because the work of a lifetime is compressed into the compulsory school attendance. When school is finished, the books are shut, and in the majority of instances the mind lies fallow and lazy.

But at last our educational authorities appear to be waking up; at any rate, to the needs of country children, and we welcome with satisfaction any move in the right direction. Now, this course of teaching that comes under the head of "Nature Studies" seems to us to be a likely plan to awaken in dormant minds love of the country and of country pursuits, and by so doing may tend to wean lads (and lasses too) from the ever growing desire to migrate to the towns.

The first step is the acquisition of a garden plot. That entails the purchase of tools. The tools, rent of ground, and manures (farmyard and chemical) are met by the Government grant; the managers finding seeds. There is also an Aid grant to fall back upon. We are struck with the fact that in the case of one school mentioned the gardening class is taken by the mistress. When the weather does not permit of outdoor work, the children have conversational lessons, write essays on the work done and about to be done, and study diagrams and pictures.

From a well kept garden to a well tilled farm is but a step, and a child who has noted the growth of vegetable life in a garden, and practically studied the best methods to ensure the vitality of the plant, will have a lively interest in the crops of the farm. The work at first is bound to be rudimentary; but it is at the early stages it must be made of interest. Object lessons are now made most delightful in elementary schools, and this work touches on objects that surround the child in its home. Insect life presents a wide field. There are insects in the various stages easily reared, and their development watched. Let them collect the objects themselves, remarking where and when found, and the teacher must do his part by explaining why certain forms of insect life are injurious or otherwise to animal and plant life. Fortunately here the teacher has immense assistance from coloured drawings and diagrams provided by the late Miss Ormerod.

Then we pass on to animal life, hedge and wood life, and it will often be found that intelligent children have gained much information for themselves, which only needs to be put into some sort of form by the teacher. We see that for Standards IV. and V. it is suggested that the child's attention should be directed to no less than thirty\* subjects; but we ourselves think the range is rather a wide one. All the subjects are most excellent, but as the average child only stays in a standard one year there would be fifteen subjects for each year. Of course, it is not as if much time could be allotted to each of the fifteen subjects. We fancy the limit is two hours per week. We will pick out the subjects on which, if we were teachers, we should be inclined to dwell:—Food of plants; common garden weeds, desirable and undesirable; grasses (and here we should suggest the value of a good collection from, say, a firm like Suttons or Carter); insects injurious to flowers, vegetables, farm crops; animal pests; bird pests; "the farmer's friend," as comprised in animals, birds, earthworms. Here surely are subjects for most useful lessons, better, we think, than courses of tonic sol fa and—but we dare not go further, or all the schoolmasters of Great Britain will be down upon us.

For Standards VI., VII., it is suggested that the formation of soils be the first subject, then the classification of the same, and the working of ditto, or, rather, how the working affects the plant life. Land surveying follows this course, and here the chain plays a prominent part. Nowadays so much is piece work that it is well if the labourer can check his own measurement instead of leaving it, as is now the case, in the hands of outsiders. There would be fewer disputes between master and man.

We cannot go seriatim through all the admirable sug-

gestions for the Nature Study course found in pages of the "Schoolmaster." We are only afraid the task as it stands at present is almost too big to be grappled with. That we fully agree with the moving spirit goes without saying, and it is always best to try to attain a high ideal. We think something might be done for the girls in the poultry line, for it is to them the care of fowls is generally committed, either on the small farm or in their cottage homes. We are certain of one thing, that someone needs teaching the art of dressing for market. There is such an advantage to be gained by those who send their fowls to either the big centres or to private customers ready for the oven.

We constantly see fowls on the table which fall far short of what they should be. We do not mean they are not fat, but they have not been dressed and trussed into good form. The young girls do not like the work, and would rather not learn. They are not taught soon enough. We do not go so far as to say this is a subject for the Elementary School "marm" to handle, but someone should do it. The fine art of female milking is very much on the wane, and the sister art of calf rearing.

Here we are with a sad shrinkage in our live stock, in a great measure because there is the difficulty of rearing. The old fashioned farmers' wives were as proud of their hand reared calves as the men were of their crops. Depend upon it, for all the ridicule thrown upon the movement, we must have women back as co-workers in the agricultural sphere—we were going to say "field," but that might have been taken too literally. There are, indeed, some field operations which are really best performed by women; but, after all, they can, if willing, find work enough and to spare in and about the homestead.

### Work on the Home Farm.

Strong winds have been rather trying to both loaders and stackers, but they brought the corn into fine condition, and stacks are rising in every direction. Here all is in stack except rakings, and a corner or two which are of little value, and will be put in the heap with them. Raking stacks, at any rate large ones, is somewhat of a novelty since binders came in, but this year they are very bulky. Threshing is general, and will be for the sake of straw, as well as money. Oats are reported to yield well, and Wheat fairly so. Barley has not yet been put to the test. Farmers are not paring their Barley stacks, neither are they thatching them at all freely. This points to early threshing. It is to be hoped they will allow the sweating period to pass before commencing. Present-day maltsters are generally prepared to take a big lot of Barley at Michaelmas if it is in condition, but not otherwise.

As we anticipated, the price of Oats has tempted farmers, and rather large quantities have been marketed. A dealer tells us that he bought 500 quarters at one country market, that the supply is already exceeding the demand, and he expects to buy at 16s. next week.

The reared calves are grazing the old seed pasture and look well. They come into the covered yard at night, and have an allowance of corn cake.

Scarce as hands are, we saw a man thatching a Wheat stack yesterday. The farmer (occupier of about 300 acres) told us he had twenty-one men at work, including a gardener, blacksmith, joiner and a saddler. Harvest did not take him long.

Potatoes will soon be ready to lift, but thatching has to be finished, and while that work is proceeding there will be a chance to put the cultivator through the Wheat stubbles. Not much can be done, but once over will be better than nothing, and they are very clean to begin with.

Lea intended for Wheat must be ploughed at once. Many thin pieces of seeds were broken up before harvest. These may be ploughed later, but as soon as convenient. The untouched seeds should be ploughed first, so as to get a stale furrow. Where Oats are in favour, no doubt these fields will be retained and sown with them, as the pasturage may be made good use of until Martinmas, especially where few roots are grown.

The sheep are finishing the Cabbages on the land where they grew. The next break is Thousand-headed Kale, after which it will be a case of common Turnips or nothing. A small allowance of Clover is given them in the racks, and  $\frac{1}{4}$  lb per head of lamb food. This is a small allowance, but lamb food is dear, and Clover plentiful. The Thousand-heads are hardly ripe enough, neither will the Turnips be when we get to them, so the dry Clover will be all the more necessary to keep the sheep free from indigestion and scour. Good horse corn is still an expensive item, and may be so for many weeks yet. New Oats are not very good feeding though they are comparatively cheap. Maize is very dear, and will be until the new crop comes in. Split Beans, Maize, and bran in equal proportions remain the best available food for the arduous autumn campaign of three months' work in two months' time.

\* This, of course, is optional.



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## Journal of Horticulture.

THURSDAY, OCTOBER 9, 1902.

### The Sweet-Sop.



SOME years ago, while staying with a friend in Yorkshire, he received a large case of Orchids and other plants from Singapore, among which was a bundle of cuttings, all planted together in a large tin case, each cutting about 7in long, without name or any clue by which to recognise them. Some had rooted, it is true, and were just beginning to grow; but for the most part they were in a wretched condition, and looked very unhealthy. As I have always had a fancy for any new or unknown plants, and my friend evidently did not set much store by his "leafless plants," as he called them, I begged they might be given to me, and on my request being granted I took them home next day, and carefully planted in separate pots as many as I thought had any chance of living, putting them into a new hotbed, and keeping them moist and shaded for a week or two. The few which remained I stuck into the bark-bed of the stove, where I had been working, pushing them into the tan behind a large Pine.

I took immense pains with my cuttings in the frame, tending them with the greatest care—with too much, in fact; for, do what I would, after they had rooted slightly and begun, as I hoped, to grow, all died off one after another. I moved two or three into a drier atmosphere, but with no better result; and the upshot of the matter was I lost them all, much to my vexation.

Two months after this, having occasion to renew some of the bark in the stove, I was moving the Pines for that purpose, when lo! behind one of them was a plant which I recognised directly as one of the very cuttings I had stuck in there ten weeks before. Yes, there it was, sure enough, growing like a

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Willow, with shoots 6in or 7in long, and looking as healthy as ever I wish to see any plant, the sole survivor of my three-dozen ill-fated slips!

The next thing to be considered was what should I do with it? Move it I must; but with the fate of its companions still fresh in my memory I hesitated about taking it up. However, at last I got a large pot, drained it well, and filled it about half full of good rich garden soil, mixed with a little leaf mould. I then carefully dug out the plant, putting it into the pot, tan and all, taking particular care not to injure or disturb the roots, and kept it close and warm for a few days until I saw that it was settled, giving very little water. Directly it began to grow I placed it in the hottest part of the stove, where it could have plenty of sun. It grew rapidly, filling the pot with roots in the course of the summer, and forming a nice bushy tree. I kept it dry all the winter, repotting it early in spring, when it started afresh, growing with great vigour, and in August it bore three large greenish flowers.

Up to this time I had not the faintest idea what my tree was; but one day, while I was showing my plants to a gentleman who had recently returned from India, he exclaimed, "Why, you have got a Sweet-Sop tree!" and so it was. My cutting had turned out to be the *Anona squamosa*, or, as it is commonly called abroad, the Sweet-Sop.

After this I had much trouble with it, as the fruit would neither grow nor ripen, dropping off soon after the flower; and for more than two years, although I obtained plenty of blossom, I did not get anything else. At last, however, I hit upon the plan of growing the trees (for by this time I had several), in smaller pots and poorer soil, and I then had the satisfaction of seeing the fruit grow and ripen.

When ripe the fruit becomes of a yellowish colour, and is covered over with large scales on a thick rind. It is about the size of a small Pine Apple, and when cut open is not unlike one in appearance, only instead of having a firm flesh, it is filled with a delicious pulp, tasting uncommonly like Strawberries, or Raspberries and cream, with the creamy taste predominating. Even in this country, when well ripened, the flavour is delightful, and I have little doubt but that in its own it is far better. The fragrance of the pulp, too, is remarkable, being like rosewater, or rather sweeter—more like the scent of an old-fashioned Cabbage Rose.

There are several other species of *Anona*, cultivated for the sake of their fruit, particularly *A. Cherimolia* and *A. muricata*. They are all natives of the tropical parts of Asia, Africa, and America; but, as I know little about them, I shall confine my remarks to the Sweet-Sop (*A. squamosa*). This tree, even in its own country, never grows above 7ft or 8ft high, and here it never exceeds the size of a bush. To grow it for fruit it should be planted in a 13in pot, and kept plunged up to the rim in a bark bed, as it will not thrive without plenty of bottom heat. The soil should be a good ordinary garden loam, not stiff, and by no means rich, as if the soil is too good the tree will flower but not fruit. Like the Mango, the Sweet-Sop delights in a very high temperature, with plenty of moisture when growing, and requires little air. Indeed, it is best grown with the Mango and Mangosteen, and treated in every respect as these trees are, excepting that the fruit requires thinning as soon as it is fairly set, leaving no more than ten or a dozen on each tree. When ripe it should be cut, although it will hang for some weeks by removing the trees into a rather cooler atmosphere. Like many other fruits, it is best when gathered fresh from the tree.

At dessert the Sweet-Sop should be divided into two or four parts lengthwise, never across, a very sharp knife being needed to sever the thick rind. This must, however, be done at table, and not before dinner, or the fine aroma will be lost. When first opened one fruit will perceptibly scent the whole room, and for this reason, when practicable, the Sweet-Sop should always be served along with the Durion, its delightful perfume completely overpowering the disagreeable scent of that fruit.

One point must be borne in mind, which is, that the flavour of the Sweet-Sop depends entirely upon the fruit

being thoroughly ripened in all the sun possible. For this very reason the taste often varies, sometimes being all that could be wished, and at others quite tame and insipid, the least shade when ripening being quite fatal to flavour.

The Sweet-Sop grows very readily from either seeds or cuttings, but when raised from seed it is shy of flowering, and, therefore, in practice, the latter is the best mode of propagating it. Care must, however, be taken not to give the cuttings too much water, as they are exceedingly liable to damp off until well established. They will not bear fruit for two years.

The Sweet-Sop is rarely attacked by insects, and is not, I believe, subject to any disease; it is easily fruited if grown in a small pot, and kept constantly in a high temperature; and, when the exquisite flavour of the fruit and its delightful perfume are considered, I think I shall not be far out if I express the opinion that ere long this luscious fruit will be found in every tropical fruit stove.—J. H.

## The Lachenalia.

The season is now far advanced for the planting and potting of those bulbous plants intended to flower next spring or early summer, whether for the embellishment of the garden out of doors or the conservatory or greenhouse. One of the prettiest and most indispensable for the latter purpose is certainly the *Lachenalia*. As it is one of the prettiest, so also is it one of the easiest to grow successfully.

The *Lachenalia* is a native of South Africa, and comes into flower at the end of April, continuing to bloom well into June. The flowers are produced on leafless stems, in a manner similar to the English Bluebell (*Scilla nutans*), only the scapes are not quite so long. The colour of the flowers varies from rich gold in the varieties *taurica* and *Nelsoni*, to bright green, red, and yellow in tricolor. Each bulb will produce from two to four flowers, according to its size and quality.

*Nelsoni* is the handsomest variety of all, and where the first desideratum is a brilliant show of flowers in abundance, there only tricolor and *Nelsoni* need be grown. Bulbs of the tricolor species are abundant, and can be bought at small cost. *Nelsoni* bulbs are scarce, and command higher prices.

The compost that suits them best is loam two parts, leaf mould and decayed manure one part, river sand one part, the whole well mixed and passed through a half-inch sieve. They should be potted into 5in pots. If the bulbs are of good size, five bulbs in a pot will be sufficient; but if only of second quality seven or eight will not be too many. Bulbs of various sizes should never be planted together in one pot, but selected; the largest by themselves, the medium sized and small the same.

The bulbs should be covered with the soil to the depth of half an inch, and the soil should be pressed rather firmly over the bulbs. So soon as the potting is over, the pots should be placed in a cold pit on a floor of ashes, on which a little quicklime has been sprinkled to prevent worms getting into the pots. The soil in the pots should now receive a good soaking of water, and no water must afterwards be given until the young growth appears on the surface, and this will be in about a month or six weeks after potting. The days will now be shorter and colder, and the plants must be removed to another pit or some other structure from which frost is excluded; but the young plants should not at any time be subjected to artificial heat, and should during the winter occupy a position near the glass, where they may enjoy abundance of cool air, protected only from frost.

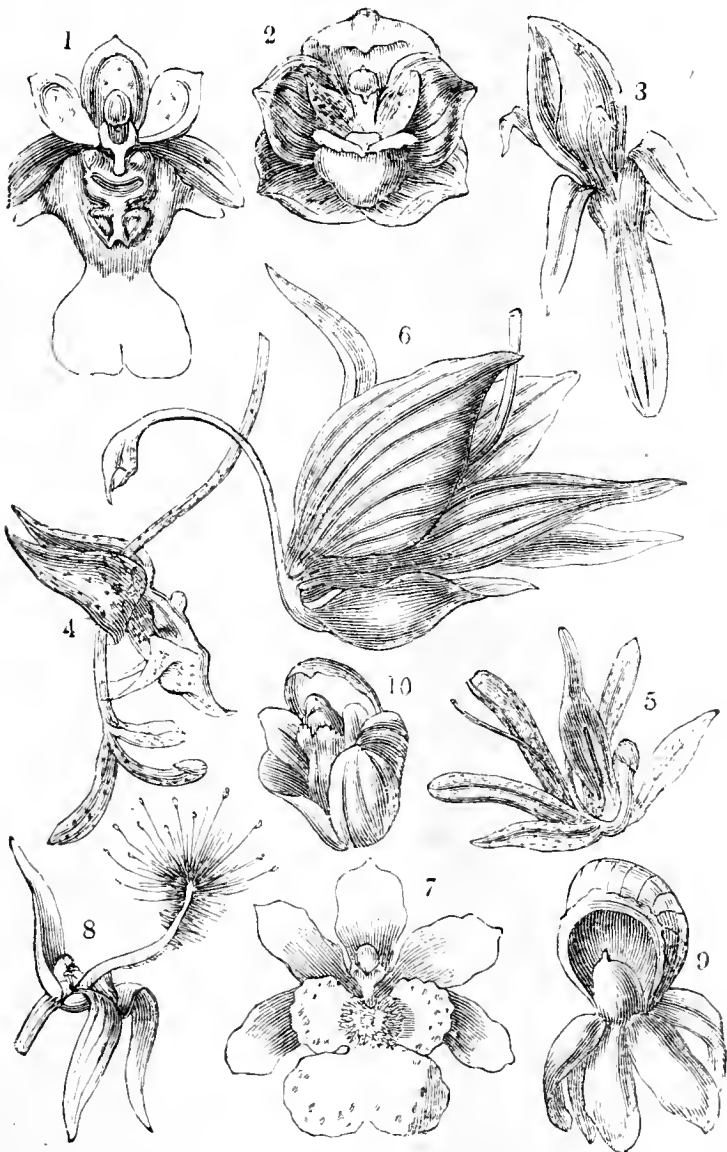
Growth will make good progress during the autumn and winter, and the plants should be encouraged by careful watering to form strong plants by the spring. The flower scapes will appear during the month of April or May, and a little artificial manure sparingly applied at this time renders useful help in developing the size and brilliancy of the flowers. Liquid manure from the farmyard is the best to use, and should be applied in a weak state, and not oftener than twice or three times a week.

The best position for them to develop their flowers in is a shelf in a greenhouse close to the glass, where they can have abundance of air. So soon as the flowers are fully developed, manure water must be withheld, and the plants arranged in a cool and airy place in the conservatory, where their pretty and brilliant blooms will help to make this house gay and interesting for a matter of five or six weeks. After the flowers are over, water should be given more sparingly until the foliage decays, when the pots may be placed on their sides in a cool place until the bulbs are again wanted for potting in August.—OWEN THOMAS.



### Forms of Orchid Flowers.

"One of the characters which especially impresses a student of the great Orchid family," writes Mr. Lewis Castle in his interesting shilling book on Orchids, "is the surprising range of floral variation, yet within such definite limits that an Orchid flower is usually easily recognised. In the majority we find three outer divisions—the sepals—and within these three, other divisions alternate with the sepals, two—the petals—being more or less similar to them in form, though frequently differing in colour, while the lower one (in a few cases this is uppermost)—the labellum or lip—is strangely metamorphosed, sometimes excessively large, at others very small, of the most peculiar forms, mimicking insects and birds, or extraordinarily and indescribably



### Forms of Orchid Flowers.

- |  |   |
|--|---|
| 1. <i>Oncidium raniferum</i> (Frog Orchid).                            | 6. <i>Cynoches ventricosum</i> (Swan Orchid). |
| 2. <i>Peristeria elata</i> (Spirito Santo of Panama), the Dove Orchid. | 7. <i>Oncidium pulvinatum</i> .               |
| 3. <i>Prescottia stachyodes</i> .                                      | 8. <i>Bolbophyllum barbigerum</i> .           |
| 4. <i>Gongora quinquenervis</i> .                                      | 9. <i>Catasetum viride</i> .                  |
| 5. <i>Cirrhaea tristis</i> .   | 10. <i>Peristeria cerina</i> .                |

grotesque. It is this which gives the prevailing character to Orchid flowers, and it is an important organ.

"In the centre of the flower we find no stamens or pistil, such as we are familiar with in other flowers, but a compound body, the column (gynostegium), which faces the labellum, and bears on that surface a hollow glutinous cavity—the stigma—and has at the summit a box-like depression, covered with a lid, the anther-case (clinandrium), in which are situated the pollen-masses (pollinia), consisting of grains of pollen, connected into various forms by a web-like or glutinous substance. Beneath the flower is the ovary, termed from its position inferior, and this, when cut across, is found to be one-celled, with three rows of seeds extending down the inner surface of the walls. They are mostly very minute, very numerous, and covered with a loose skin (testa).

"These are the prevailing characters of the family. There are, however, some exceptional cases, and some details which will be referred to presently. For instance, an Orchid flower is usually very irregular, owing to the development of the labellum;

yet in a few genera, as the *Thelymitra*, *Hexisea*, and *Paxtonia*, the parts of the flowers are nearly all equal.

"In these the lip is the same size as the petals and sepals, and could scarcely be thought to be the same organ as the lip in the *Ladies' Slipper* (*Cypripedium*). Through these regular flowered Orchids, Lindley traced the relationship to the *Iris* family, especially to *Sisyrinchium*; and we obtain a chain of forms, varying in the modification their flowers have undergone, from these to the strangest and most mechanical flowers imaginable."

### The Week's Cultural Notes.

The weather must be closely watched now, and the treatment of the various sections of Orchids varied accordingly. In dull, wet weather it is a mistake to damp down as usual the first thing in the morning. Better by far to wait until later in the day, while on some days it will not be necessary to damp at all. Anyone who has had a little experience knows by the feeling on entering a house whether it is right or not, and will damp or not accordingly. When a little fire heat has been kept in the pipes, and a good circulation of air thereby allowed, damping will be necessary more frequently than when no heat is used.

But an hour or two of drying never hurts any Orchid at this time of year, while a too abundant supply of moisture is harmful to many, especially should the outside temperature be low, and prevent free admission of fresh air. In the mildest cases it leads to flabby and weak foliage; while in the worst, mould, spot, and other attendant diseases difficult to check are set up. Those growers who, for the sake of a little trouble or a trifling outlay in fuel, leave their fire out entirely at this time of year, little think what a short-sighted policy they pursue, for without a little warmth in the pipes it is unreasonable to expect a proper circulation of air.

*Cattleya Harrisoniae* is a lovely plant, but one very often badly treated by growers. The flowers are very lasting, and what is more to the point, are very freely produced, but none the less even weak plants are allowed to carry them until they fade, and this often in a draughty conservatory or room where the atmosphere is quite uncongenial to them. A more weakening régime, or one more calculated to injure the plants, can hardly be imagined, yet this is what goes on in scores of places yearly. Were the flowers removed after a reasonable time and the plants returned to a situation where the atmosphere would replenish the energies spent upon flowering, all would be well.

And this reminds me of a fact often lost sight of, that when *Cattleyas* once fall into a really bad condition they can never be again restored to health. A newly imported piece may come home with shrivelled stems owing to the long drying it has had, and in the presence of heat and moisture will soon plump up and regain strength; but once let a plant that has been grown for years under glass shrivel up badly owing to wrong treatment, and not the most skilful of Orchid growers will in one case out of a score bring the plant back to health. Keep well aired, then, is my advice to growers of this useful species, and do not be led, because of the lovely show the plants are making, to keep them at work too long, and thereby imperil their chance of future usefulness, or even life.—H. R. R.

## The Perennial Lathyrus.

So far, the pure white form of *Lathyrus latifolius* has monopolised the attention of amateur and professional alike, but surely the deep pink and delicately blush-tinted and striped varieties deserve some attention. It may not be generally known that varieties embracing so many shades of colour exist, and undoubtedly, when they are as well put before the flower-loving public as the white *Lathyrus latifolius* has been, they will attain as great a meed of praise.

To ensure good results they require generous cultivation, and to have them in really fine form will amply repay for indoor culture. When this can be afforded, crops of flowers may be obtained some six weeks before their wealth of bloom enlivens the gardens. If planted indoors, the back wall of a cool greenhouse suits them admirably. A good trench to the depth of 3ft should be taken out, the bottom deeply broken up with a fork, and the trench refilled with a compost of good loam, a sprinkling of  $\frac{1}{2}$  in bones, with a liberal addition of charred garden refuse. Vigorous syringing with soot water will keep in check the troublesome red spider. Copious douchings overhead with weak liquid manure during active growth not only help to keep this in check, but assist the plants considerably.

Like its blood relation, the Sweet Pea, the season of flowering may be prolonged by keeping the seed pods removed, and I have found a slight rest and pruning helpful in stimulating fresh growth, with the invariable sequence of a good crop of useful flowers in the late autumn.

The plants can be increased by cuttings taken near the base,



but unfortunately they resent too much cutting when the growth is young. As screens for covering unsightly places, or forming arches and bowers, they are extremely useful, whilst their hardiness and their increasing vigour when once planted compensates to some degree their lack of perfume, a quality that makes *Lathyrus odoratus*, or Sweet Pea, such an universal favourite. Let us hope that ere long the assiduous cultivators who have taken it in hand will give us new varieties embracing in one form the good qualities of both.—E. J. LOVE, E. Dereham.

## Arbor Days.

(Concluded from page 306.)

The question is always asked whether forests will pay. I can only say that Herr Gustav Wegener, Councillor of Forests, of Coburg, in advocating a term of eighty years for the cutting of Pine forests, calculates to receive from medium soil a yearly revenue of from 3 to 5 per cent. on the value of the land. With Beech forests it would be about the same; but the timber of Oaks, requiring from 120 to 160 years before being felled, is constantly rising in value, and the State is in future only going to plant Oak for timber, and not for firewood.

I have always advocated Arbor Days since, in 1882, I passed through the west of the United States, and noticed the alteration they have made in the appearance of these formerly treeless regions. Whether these are or can be introduced with advantage in Great Britain I am unable to say; but if so they might within a short time become a most enjoyable holiday for the whole neighbourhood. I presume there are not many schools with an area of five acres—the smallest area recommended in the United States. But if there is any available land for planting in any neighbourhood the children of the school or schools, although taking part in the planting, need not prevent grown-up persons from planting also, and thus make it a general holiday, as sketched by Mr. H. S. Sterling Morton, who established Arbor Days in the United States, when he said in 1887 at the State University of Nebraska, "Ordinary holidays are retrospective in honour of something good or great, but Arbor Day is not like other holidays; it sketches outlines, establishes the useful and beautiful of ages yet to come, etches upon our prairies and plains gigantic groves and towering forests of waving trees, whose beauty will compel the admiration and gratitude of men and women yet unborn. It is the sole holiday of the human family which looks forwards and not backward."

Cannot horticultural societies offer premiums to the men who properly plant the greatest number of trees during the next three years, or at any District Arbor Day? And would not such Arbor Days soon be welcomed with as much zest and enjoyment as they are now in most of the United States (and here in South Australia), even where there is no great scarcity of trees in the neighbourhood? Each year larger and larger numbers interested in previous plantations, which may be near or adjoining that to be planted, will meet there and enjoy both this meeting with old school-fellows, and also be pleased with the growth of the trees they had formerly assisted in planting.

To encourage the best growth, it seems to me not out of place now to refer to manuring. Only quite lately Belgium, Denmark, and Germany have commenced to fertilise the land upon which forests are to be planted, or even established forests. Formerly nursery plots for forest trees were usually manured with dung, but in 1869 Peruvian guano was first applied, and soon afterwards other commercial manures. It was not, however, till 1880 that this became at all general. Photographs taken of young trees of the same age have convinced me that the increased number and size of the roots produced in fertilised nurseries gives them a better chance when transplanted, and Dr. Smets states in his pamphlet, "La Culture du Pin Sylvestre en Campine," that "if you sow Pines, as so often is done, in a nursery with impoverished soil, you can only obtain sickly plants, which have little chance of success."

M. Martinet also says: "It is a wrong idea that young seedlings should be acclimatised and made hardier, so that, if intended for poor soil, they may be satisfied with the local conditions. Pines one or two years old take out of the soil from 24lb to 28lb of potash, 20lb to 24lb of phosphoric acid, 60lb to 64lb of lime, 16lb to 20lb of magnesia, and 56lb to 64lb of nitrogen per acre, so that it is an undoubted fact

that after the removal of the seedlings from the seed-beds the soil is so impoverished that mere stable dung and green manuring is not sufficient to again raise strong seedlings from beds which must of necessity be used again and again."

Dr. Giersberg, of Berlin, from whom I take the particulars as to the manuring, recommends for nurseries the use of from 640lb to 800lb of Thomas' phosphate and the same quantity of kainit, the latter to be applied long before the sowing of the seeds for green manuring. The crop should be ploughed in when in full bloom and the first pods are formed. Without green manuring, nitrate of soda should be applied between the rows in one or two doses, according to the quantity which seems necessary, from 80lb to 160lb. Dr. Giersberg also thinks it advisable to put a portion of the Thomas' phosphate into the subsoil, and the rest, before or after sowing or planting, into or on the surface soil. In nurseries on peaty soils in Denmark and in Schleswig-Holstein the ground is dug at least 13in deep in autumn, and then receives 640lb of kainit and 400lb of Thomas' phosphate of 17 per cent. per acre.

In May 200lb of Lupines are sown and ploughed under as before mentioned, with 1,200lb kainit and 800lb Thomas' phosphate again applied. This may seem too much, but when actually 3,200lb of each were applied the seedlings thrived well, and were certainly not damaged. Frequently up to 160lb of nitrate of soda is given later on, and even a second dose.

Belgium seems to be in advance of all other countries in the use of large quantities of fertilisers for forests. Sixteen to 18in is the usual depth of ploughing there before planting, and if a subsoil plough can be used 2ft 4in to 2ft 6in is not unusual. Large tracts of waste lands are thus planted and fertilised, and to do so at the smallest expense Rye and other crops are raised for some years between the rows of the young trees. Green manuring mostly consists of Lupines, which will penetrate even hard and pebbly soils to a depth of 3ft, and thus permit the moisture to rise, by means of the openings left by their dead roots, for the benefit of the trees.

Liming is also used, or in very sandy soil marling is preferable. Potash and phosphoric acid are added to improve the surface soil, which, when thus treated, is expected to keep the trees in good health and growth for ten to fifteen years, after which time the roots are likely to find sufficient nourishment in the deeper subsoil. Where green manuring with Peas was used on a sandy soil of the eighth class, a good crop gave no less than 180lb of nitrogen per acre, equal to about 1,150lb of nitrate of soda. Professor Dr. Goetting used in one instance 640lb of Thomas' phosphate and also of kainit; in another twice as much; and Dr. Dalgas, of the Association for Planting Danish Heath-lands, actually recommends five to ten times as much potash, and four to six times as much phosphoric acid.

That it will pay to use fertilisers for forests can hardly be doubted. The experiments, at least, are very encouraging, but more time must elapse to decide whether any further fertilisers are required, whenever, for instance, Pines show at a certain age a stoppage in their growth. Professor Dr. Wohltmann, after many experiments, declares that in most instances large stores of mineral fertilisers are to be found in the deeper subsoils, and thinks more manuring unnecessary. It is ascertained that 1lb of nitrogen is sufficient to produce from 125lb to 200lb of dry wood, 1lb of potash up to 3,300lb, and 1lb of phosphoric acid up to 5,000lb.

Whenever fertilisers are given to single seedlings or to larger trees, they should not be used in larger quantities, nor without being well mixed with the soil. From 1oz to 2oz of Thomas' phosphate,  $\frac{1}{2}$ oz to 1oz of 40 per cent. kainit, and  $\frac{1}{2}$ oz to 1oz of nitrate of soda may be sufficient, the last to be repeated the following year. In Eberswalde, in a forest of seventy-year-old Pines in poor condition, 800lb of both Thomas' phosphate and kainit and 160lb nitrate of soda per acre were used. At Hadamar, Oaks eighty years old have been felled, and Pines sown amongst the stumps with the same quantity of fertilisers. The stumps showed shoots as much as 6ft long, while on unmanured land these were only 2ft to 3ft long. Fifteen-year-old Pines in miserable condition, only 1ft 8in high, and making only 2in shoots annually, were three years ago mulched with horse-dung. In the very first year they showed a fine green colour, and the average annual shoots made since are more than a foot long. Mulching with Potato haulm or other material gave not quite so good a result. The annual shoots averaged 8in; the nourishing constituents in the dung caused, therefore, the growth of the extra 4in.—F. E. H. W. KRICHAUFF (in "Journal of the Royal Horticultural Society.")

# NOTES & NOTICES

## Appointment.

Mr. Alfred Clark, late foreman under Mr. F. G. Small, of Ashton Hall Gardens, as head gardener at Melbourne Hall, Melbourne, Derbyshire, an estate of Earl Cowper's.

## Beckenham Gardeners.

An interesting syllabus of meetings and lectures for the coming winter has been arranged by the members of the Beckenham Horticultural Society. This society possesses a horticultural library of 300 volumes, and nine evenings are specially set aside that members may foregather among the books and discuss them. Applicants should be sent to Mr. Mark Webster, librarian, Beckenham.

## Scotch Carnations.

How wonderfully late Carnations are this season with us in the north. Plants are full of bloom still, and no end of buds that, alas! shall never be able to expand into lovely flowers. I have never seen even such good doers as Asphodel, Sadek, Mephisto, and others, so fine, and some of the newer kinds are retaining the good opinion previously formed of their qualities. At the beginning of the season, and especially under glass, the gloriously brilliant Sir R. W. Griffiths was just a little disappointing, as were also some others; but of late, in the open, it has come out in all its beauty. In its home in Kelso, in Messrs. Laing and Mather's nurseries, it was last week, producing the most lovely orange-scarlet blooms in great profusion. Our layers have done splendidly, too, and it may well be noted as an indispensable border Carnation.—B.

## Flower-adorned Business Premises.

"When at Bath some weeks ago," writes "E. D. T." to the "City Press," "I noticed what an effective show was made by a little floral decoration outside one of the banks in that city. I found on inquiry that it was the banking firm over which our own Lord Mayor presides that sets this excellent example. I inquired as I passed how much it cost to thus enliven the premises all the year round (for in winter, evergreen shrubs take the place of flowers), and I was struck by the comparative smallness of the sum. The City proper, and London generally, would be much improved if more attention were paid thus to 'appearances.' The attempt on the piazza of the Royal Exchange compares most unfavourably with the instance I quote at Bath. There is another consideration to name in this connection, and that is the help it would be to our nurserymen and florists in the suburbs, if more regard were had to making dingy business premises look a little more cheerful by floral and evergreen decoration."

## Reading Gardeners' Association.

The first fortnightly meeting of the winter session was recently held in the Abbey Hall, and was well attended, Mr. G. Stanton presiding. The subjects for the evening were: "Melons in Pots," and "Stoking." The former was introduced in a very practical manner by Mr. E. F. Exler, The Gardens, East Thorpe, Reading, under the following headings: Soils, watering, syringing, stopping, ventilation, shading, insects, disease, varieties, &c. The latter subject was taken up by Mr. E. Fry, The Gardens, Greenlands, Reading, who made some forcible remarks on the stokehole, boilers, and fuel. The discussions were well sustained. Great interest was created in an exhibit of Cactus Dahlias staged by Mr. C. P. Cretchley, The Gardens, The Honeys, Twyford. The varieties were Lord Roberts, Rosine, Vesta, J. W. Wilkinson, W. Jowett, J. Weir Fife, Cornucopia, Mrs. E. Mawley, and Mrs. Carter Page. Mr. H. House, The Gardens, Oakfield, Reading, staged a collection of Apples and Pears, and Mr. G. Durrant, The Gardens, Preston Lodge, Reading, specimens of the various types of Dahlias. Seven new members were elected. The subject for the meeting to be held on October 13, is "Flowering Trees and Shrubs," illustrated by limelight pictures, by Mr G. Gordon, V.M.H., editor of "The Gardeners' Magazine."

## Trial of Potato Diggers.

The great trial of Potato diggers, under the auspices of the Royal Lancashire Agricultural Society, whose president, the Right Hon. the Earl of Derby, K.G., G.C.B., offered very valuable prizes (first prize £20, second prize £10), was held at Carr Hall Farm, Burscough, yesterday, at 11 o'clock prompt. Nine machines, representing the best makers of Potato diggers, competed, and the trials are looked to by agriculturists and growers of Potatoes in the North of England with special interest.

## Tree within a Tree.

There has been found at High Wycombe a curious illustration of growth under abnormal conditions. A quantity of Canadian Birch timber arrived at one of the chair factories there, and in the centre of one piece, 3in. in thickness, there was found a young Birch tree, 2½in in diameter, which had escaped the saw. It had enjoyed an independent growth, and it is supposed, reports the "Sun," that years ago a seed fell into a sapling, which forced its way up through the trunk of its parent. The hollow was completely filled a distance of several yards. This curiosity is to be preserved.

## Horticultural Meetings in London.

Meetings of floriculturists in London were held on Tuesday last as follows:—The Committees of the Royal Horticultural Society, 12 to 1 o'clock, in the Drill Hall of the London Scottish Volunteers; National Rose Society's General Purposes Committee, at 3 p.m., in the rooms of the Horticultural Club, to consider the programme for 1903, &c.; National Sweet Pea Society, at 4 p.m., in the Hotel Windsor, to consider the alteration of Rule 7; and in the Royal Aquarium the Floral Committee of the National Chrysanthemum Society met after the judging at the Society's early autumn exhibition, was completed.

## Horticulture at Brotton.

At the request of several miner-gardeners and allotment holders in Brotton, Yorks, a course of five lectures on "Horticulture" has been arranged, and will be delivered in the Institute by Mr. Alfred Gaut, of the Yorkshire College, Leeds. Mr. Gaut has lectured at other centres in the Cleveland district, and the instruction gained by those who attended has proved of value to many who cultivate the soil, either as a hobby or for profit. The arrangements have been made in connection with the North Riding County Council technical instruction scheme, and Mr. A. P. Maddison, Brotton stationmaster, is the local secretary.

## Echoes from Hamilton.

October has opened here with good prospects. The air is dry and cold, but seasonable, and we see more of the sun than has been our fortune for some time. Those among us who declared that on the reappearance of the sun, it would be meet to have its photo taken for "Auld Lang Syne," can have every opportunity for doing so now. Harvesting of all kinds has become now general. What a comparison with ordinary years; quite a month behind. Nor do the cereals look as if they were even yet quite in approval of the application of the sickle. They appear so wan and tinged with an unnatural greenish hue, so different to that healthy golden colour generally associated with the advent of autumn. But our soil is naturally cold and unkindly; a cold clay and consequently retentive of moisture. The forests themselves also seem to share in the sickly, yellow-greenish tinge, and do not present themselves in their wonted garbs of golden red. The leaves, already, it is true, come rustling down, but they seem not to have passed through those interesting—and shall we also say instructive?—stages at this period of their existence. September was a phenomenal month in many respects. It furnished us with a very severe and destructive gale, also one night of severe frost. Wet, of course, and sunless days were largely in evidence, but, perhaps, upon the whole, with all its defects, it was a decided improvement on the two or three months preceding it. Chrysanthemums, though naturally not so good as usual, are nevertheless in some cases looking exceptionally well. They promise, both at Camphill and the Botanic Gardens, Glasgow, to be very fine, and already there is a fine display to the fore. The good weather of the last few days has wonderfully revived bedding plants, and at present our gardens are looking not quite so desolate as they appeared some weeks ago. Hawthorn berries are in abundance, and so are blackbirds.—D. C.





#### Housing the Plants.

Unsettled and treacherous weather is now our portion, and it is not wise to trust good plants to the buffeting of wind and rain, and the probability of sharp autumn frosts. The latter may not harm late plants, but those with prominent buds are more susceptible to injury. In addition to these reasons for housing, is the important one of advancing the buds so that the blooms may open at the time expected of them, whether for exhibition or other purposes. Immediately any plants show colour in the buds it is distinctly injurious to the buds to allow the plants outdoors longer, for the colder nights and heavy dews cause a check which may not, however, be evident for some time.

It is assumed that the structure in which the plants are placed is thoroughly clean, and a light position can be accorded them. Before taking in the plants, go over them, and pick off any decayed leaves; cut out any weak or superfluous shoots, rubbing out side shoots forming or extending in the axils of the main leaves. Pull out weeds on the surface of soil in pots, and wash the latter clean, dealing with the under surface as well as the sides.

Attention next must be given the foliage, which is liable to mildew attacks, especially on the under sides. The remedy for mildew consists in the use of Veltha, or of a mixture of flowers of sulphur and water. Lay each plant on its side in some convenient place, and syringe the under sides of the leaves with the mixture. A large mat placed on the ground, and the plant laid upon it, will answer well in preventing the foliage being splashed with dirt. Mildew is a fine, white deposition on the leaves, and is the result of the growth of a fungus. If a good deposition of fine sulphur can be made to cover it, it will be destroyed.

A light, airy house, and one that can be heated if necessary is best for Chrysanthemums. Many growers, however, must utilise the space they have at command. It is not advisable to have the heads of the plants too near the glass, as the extremes of heat and moisture are there great. This may cause injury to the blooms as they advance, they then being very susceptible to adverse influences. Plants producing exhibition blooms may have their heads about 18 in or 2 ft from the roof. The pots should not stand too closely together. It is better that air and light should reach well among them, so as to preserve the foliage until the last.

Groups of plants to give decorative display may stand more closely, but they are no worse for extra space if it can be afforded. Specimen plants must stand singly. In arranging a group with a background, place the tallest plants in the rear, gradually sloping towards the front, where the dwarfiest must be placed. The shape of such a group may be oblong, square, or semicircular. Such groups are best constructed when the plants come into bloom, as a tasteful combination can be formed with the help of other plants—Ferns and foliage plants. For a time, after first housing, it will be noticed that there is no progress, and the wants of the plants are few. Plenty of ventilation is essential.

Feeding may continue with all the plants from the time the buds show until the blooms are well advanced, when it should cease, clear water only being given. Disbudding is another item which requires attention, especially from the later plants and those producing the flowers on terminal shoots. Remove dead foliage from stems as necessary, and also take the opportunity of affording more space by removing any plants as they get past their best.—E. D.

#### The Collection at Draycot House, Chippenham.

The present is a time of much speculation as to the coming prospects among Chrysanthemum growers, and especially by those who number among the large body of exhibitors. The name of Bible has been a familiar one among successful exhibitors for a long time, not only since he has held his present important charge, but at an earlier period. Draycot Gardens has during the past two decades possessed reputations of a varied order, but in Chrysanthemum fame it has only taken up its new rôle since Mr. Bible has taken over the cares of its destiny. A recent visit paid revealed one eloquent fact, namely, that he is an extreme enthusiast, endowed with wonderful energy, and possessing a memory much to be envied. With all these high attributes it is only to be expected that not only Chrysanthemums are in good hands, but that other sections of the garden and its crops are similarly well done and cared for. The kitchen gardens, lawns, woodland walks, herbaceous borders, and glass departments are all severally bearing the mark of a generous employer—which the Prince Hatzfeldt undoubtedly is—and a gardener worthy of his name and calling.

For the production of large flowers some eleven hundred plants are grown, and among these many of the better novelties of the year may be found. Mr. Bible is enabled to grow sufficient of the newer ones to prove for himself their true merits, the time of stopping, and the best buds for producing large and well coloured flowers. He places, and rightly, too, a large value on depth of colour, apart from mere size in his blooms, and as the shows calling for his patronage extend over a somewhat wide period, he necessarily has to treat his plants with these objects and dates well in view. Thus, while some were at the time of my visit fast developing their buds, others were outdoors peacefully awaiting their turn. They are drafted inside in batches as their purpose instruct. Japanese and incurved sections only are grown, and though in numbers the former preponderate, the last-named are, if anything, the greater favourites, and they embrace a wide range of variety old and new.

The fruit houses at Draycot, some of which are of modern times, are very well adapted to the flowering of Chrysanthemums, and for the present they are allowed to enjoy all available light without shade or other roof obstruction. The forward buds display wonderful vigour and colour, and their future promises well.

Among novelties of the season may be mentioned Mrs. Thomas Pockett, Mrs. H. Emmerson, and General Hutton, of Australian origin, and the complete set sent out by Mr. Godfrey, all of which display great vigour of stem and leaf, and which is expected will be a distinct gain in bright colours. Older varieties are legion, but among them Ernest Bettisworth, W. R. Church, J. J. Thorneycroft, Mafeking Hero, E. Molyneux (good), Mrs. J. Lewis, Kimberley, Madame Carnot, Mrs. Mease, G. J. Warren, The Princess, Loveliness, Lily Mountford, Nellie Pockett, W. R. Barrett, Mons. L. Remy, Calvat's Sun, Sir George White, Mrs. Barkley (extra fine), Miss Elsie Fulton, Mrs. Coombes (good), H. J. Jones, and J. R. Upton.

The newer incurved number among them Mrs. F. Judson, Mrs. C. Crooks, William Higgs, Mrs. Neville, and George Hunt; others, such as Duchess of Fife, Mrs. H. J. Jones, Mrs. Murray, Globe d'Or, the Princess of Wales family, Dome d'Or, Ada Owen, Baron Hirsch (deep coloured), The Colonel, Rose Owen, Mrs. R. C. Kingston, C. H. Curtis, and Queen of England are excellent in every respect.

Disease is not absent, though its presence does not give cause for much alarm, for the rust spots are not yet abundant, and, as in other years, it is only certain kinds that seem liable to its attack. As might be expected, efforts have not been wanting for its suppression; a prescription of Mr. Bible's own has been brought to bear upon them with the aid of the syringe for some time past. Mystery still hangs about the disease despite the fact that anti-rusts and other fungus-destroying remedies are claimed to do all that is needed.

Though the season has been such a sunless one, maturity of the Chrysanthemum does not appear to be an absent quality, the stems displaying the pleasant brown tint, leaves leathery, and the buds swelling up with a freedom that gives occasion for genuine hope. Despite the multitudinous duties, and the vast area that has to be traversed over parkland and garden Mr. Bible finds time to attend personally to every detail of his Chrysanthemums.—S. Trowbridge.

## Lilies of the World.

(Continued from page 238.)

**CHINESE LILIES (GENUS LILIUM).**—Of these there are some twenty-five species known at present, but it is expected now that China is being opened up this number will be greatly added to. Very few of the twenty-five species are yet in commerce, but soon will be, and if they bear out the reports of collectors, they will form valuable additions to our garden plants. Lily amateurs are anticipating great things from this comparatively new Lily source, and from what we know leads us to anticipate there will be no disappointment.

**L. BROWNI.**—This is a plant with a history, beyond that of almost any other Lily I know of in cultivation. Some fifty or sixty years ago a Belgian one day was wandering about the now world-famed nursery of Mr. Charles Turner, Slough, England, and accidentally discovered flowering in a pot a Lily he had not before seen, and bought the same for 21s. from the proprietor of the nursery in question, who could give no history as to how the plant came into the nursery, it being part of the stock he found when becoming proprietor of Brown's business, as it was at that time called. It appears there were two brothers Brown, original proprietors. One became a missionary and went to the Far East, and the supposition is this was part of a consignment of Lilies, &c., sent home by the missionary Brown from China, all of which appear to have perished from neglect except this one, which would not follow its companions. The Belgian, whose name is not recorded, increased the plant and sent it out under its present name (Browni) in compliment to Mr. Brown. From this one Lily bulb sprung the entire stock of this Lily, now well known commercially in Europe, &c. From descriptions of recent finds of Lilies in China, I should in no way be surprised to learn that this beautiful Lily is one of them. I am thus particular, inasmuch as Japan has been named as the home of Browni, and the Japanese under this name send annually to Europe and America *L. odorum*. Under the name *L. Browni* it is somewhat in the same way, but quite different. *L. Browni* has long, pure white flowers of great substance, measuring some 10in in length. Outside, the flower is rich chocolate-brown, height 3ft to 5ft. *L. odorum* will be found fully described under Japanese Lilies.

**L. Henryi**, named after Dr. Henry, a gentleman in the Chinese Customs, Szemas, Tonkin, who sent bulbs to Kew as a new species of Lily. For its introduction into commerce we are, however, indebted to the enterprise of a Yokohama merchant, who, at great expense, went to Hong Kong, and from thence sent a Chinaman to collect the Lily in its native habitat, no doubt with the assistance of Dr. Henry. I had an offer in Hong Kong of the same assistance, but I said the man who first risked his money in the enterprise was the man to reap the harvest. When in Hong Kong, I heard of two collectors out from England to gather in the spoils of the Celestials. One I traced up the Yangtse, sent by Veitch, Limited, London, and no doubt under the auspices of Dr. Henry, if the Boxers did not have his head, returned home with much spoil of the land. The other was sent out by Sanders and Co., St. Albans, on a secret mission. Of him it might be said he came and went, leaving no footprints on the sands of time. When he passed through Hong Kong all was quiet at the time. How far he went into the unknown land in search of spoil I have seen no report, neither as to whether the Boxers left his head on his shoulders. I have noticed that some writers describe *L. Henryi* as a form of *L. speciosum*. I could not endorse this. I considered its nearest relative is *L. tigrinum*. *L. Henryi* has beautiful, soft, orange-yellow flowers, with as many as twenty on a stem when the plant is established and strong. Its culture is one of the easiest, and I may say its future is ensured; height, 6ft.

These two Chinese Lilies named are of the easiest culture, and those new species from the same country, which may soon be in commerce, from the flattering descriptions which precede them of their exquisite beauty and easy culture, we Lily amateurs may well look forward to a great treat, and I am sure South Africa will find a place for most of them in her rapidly developing gardens, now that it is found that the Cape Peninsula has the finest climate in the world for the growth of flowers.—PETER BARR, V.M.H.

## Needs of Fruit Trees.

(Continued from page 108.)

Respecting the need of fertilisers for orchards, Professor Voorhees says, it is argued by many that fruit growing is quite similar to growing timber trees; that the question of soil exhaustion is not a matter of very great importance provided the soil is well cultivated, and that all soils contain sufficient quantities of the food elements to insure the relatively small available supply required from year to year. It is admitted that on soils of good mechanical condition, well drained and cultivated, which are naturally adapted for fruit as well as other crops, because well supplied with the essential constituents—nitrogen, phosphoric acid, potash, and lime—the exhaustion arising from the continuous removal of crops will not become apparent for a long time, but it should be emphasised that it is only upon soils which possess these characteristics that the growth of fruit, even poor fruit, can be continued for any considerable period without the application of manures.

### Different Crops Require Different Food.

It is obvious that such specific results as have been obtained concerning the needs of general garden crops cannot be applied with any degree of accuracy to fruit crops, particularly the larger fruits, as Pears, Apples, and Plums, because these differ from vegetables—first, in their habit of growth; second, in the character of the produce; and third, in their relation to soil exhaustion.

In the first place, garden crops as a rule require but one year for the entire processes of vegetation and maturation. For fruit crops, with but few exceptions, the purely vegetative processes continue for at least three years, and with many kinds much longer; while after the fruit bearing period begins, the vegetative processes do not cease, but are coincident with the growth and ripening of the fruit.

In the second place, the product of the fruit harvest differ very materially in its character from that of ordinary garden crops, which mature their products and die in one season, because a whole season is required for its growth and development; that is, it is necessary that there shall be constant transfer of the nutritive juices from the tree to the fruit throughout the entire growing season, while the growth for each succeeding year of both tree and fruit is dependent upon the nutrition acquired and stored up in buds and branches, as well as upon that which may be derived from the soil.

In the third place, the relation of fruit growing to soil exhaustion is very different from that in general crop gardening, because in orchards there is an annual demand for specific kinds and proportions of soil constituents; it is really a continuous cropping of the same kind; there is no opportunity, as in the case of ordinary garden crops, to correct the tendency to exhaustion by a frequent change of crop, or the frequent growth of those which require different kinds and amounts of plant-food constituents.

### Principles Regulating Growth.

In studying methods of manuring orchards, it must be admitted that the general principles which apply to fruits apply quite as well to vegetables; that is, the essential constituents of manures must be the same. A fruit tree will not make normal growth in a soil destitute of nitrogen. That nitrogen encourages leaf-growth is a recognised fact, and since trees grow by means of leaf and root, its presence is required in the soil in order to promote the growth and extend the life of the tree. It is very evident, too, that potash is an essential constituent in the growth of fruits, not only because it constitutes a large proportion of the ash of the wood of the Apple, Pear, Cherry, and Plum, and more than 50 per cent. of the ash of fruit, but because it forms the base of the well-known fruit acids, and in order to nourish a tree properly as well as to ensure proper ripening, phosphoric acid is also very necessary. It is also a matter of common observation that, in the production of stone fruits



particularly, lime is an important constituent. Its function seems to be to strengthen the stems and woody portion of the trees, to shorten the period of growth, and to hasten the time of ripening. Fruit trees growing on soils rich in lime usually show a stocky, steady, vigorous growth, and the fruit ripens well; while those on soils which contain but little lime, particularly the clays, appear to have an extended period of growth, the result of which is that the wood does not mature and the fruit does not ripen properly.

Nitrogen is particularly efficacious in promoting growth. In fact, the amount of growth and the colour of foliage are reliable guides for the application of nitrogen. When mature or bearing trees make a foot or more of growth upon all shoots, and when the leaves are of good size and dark green coloured, the soil probably has enough nitrogen. A free application to such soils of the element nitrogen might do more harm than good in promoting growth at the expense of fruit.

#### Tillage an Advantage.

In general it is better to supply nitrogen by good cultivation, which assists nitrification in the soil. If the trees do not make sufficient growth and are yellowish in foliage, good cultivation begun early and repeated very frequently in connection with the use of potash and phosphoric acid, will usually correct it.

Potash is generally the most important ingredient to be applied directly to orchards, particularly after the trees have reached mature age. The store of available potash in the soil is much increased by the thorough tillage which has already been recommended, but in fruit-bearing orchards potash should also be supplied in some commercial form, as sulphate or muriate of potash.

In general phosphoric acid is probably less important in fruit production than potash, although it throws the tree into fruit quicker, and has a most beneficial influence on the growth of the wood and leaves. The best form in which it may be applied to trees is probably by bonedust, and half and quarter-inch bones. The coarser the bones the heavier should the dressing be.

The amounts of manure to be applied depend upon the character of the soils, the kind of fruit, and the age and vigour of the trees.—J. J. WILLIS, Harpenden.

## Insects as Garden Adornments.

A little while ago, taking his morning stroll round, a gentleman remarked to his gardener, "I can't think how it is, John, that there seem so few butterflies about the garden now." To this John replied, "It's because we don't grow the old-fashioned flowers, they don't care for these new sorts from abroad." I doubt whether the old man was right on this point, for the perfume of many exotic species is highly attractive both to butterflies and moths. But if he was thinking about the food of the caterpillars, hardly any occur in gardens or orchards, except those of the common white kinds.

With regard to this present season, owing to the wet and stormy weather of early summer, butterfly life has suffered generally throughout our islands, hence the numbers resorting to garden flowers have been below the average in 1902. Recent experiments have been made with a view to the introduction of various ornamental species of butterflies into London parks and gardens, but they are inclined to make themselves at home, and of course they offer a great temptation to juvenile hunters. Stragglers of the Vanessa tribe, such as the red admiral and small tortoiseshell, occasionally appear upon flowers in London's open spaces, it is true. But the commonest butterfly we see is the small white (*Pieris Rapæ*) which breeds in many London gardens, living as caterpillar upon all sorts of plants. Some of the large white (*P. Brassicæ*) also take excursions amongst the flowers, having fed upon Cabbages or kindred vegetables on kitchen garden ground near.

We all welcome the "children of the sun" to our gardens, be they small or large that visit us; some of our friends, though admiring the large, handsome species, think it is quite delightful to see the small blues and skippers moving gracefully from flower to flower. Much depends upon locality—a garden near heaths, extensive fields and old chalk pits, or patches of waste land where nettles and thistles are surrounded by a thick undergrowth, is one likely to have butterfly visitors. Certain woodland species seldom leave the copses for gardens, though the Rev. J. G. Wood sets down the high brown fritillary on his list of insect foes, because the caterpillar was stated to have been found on garden Violets. Its occurrence must be exceptional, and it



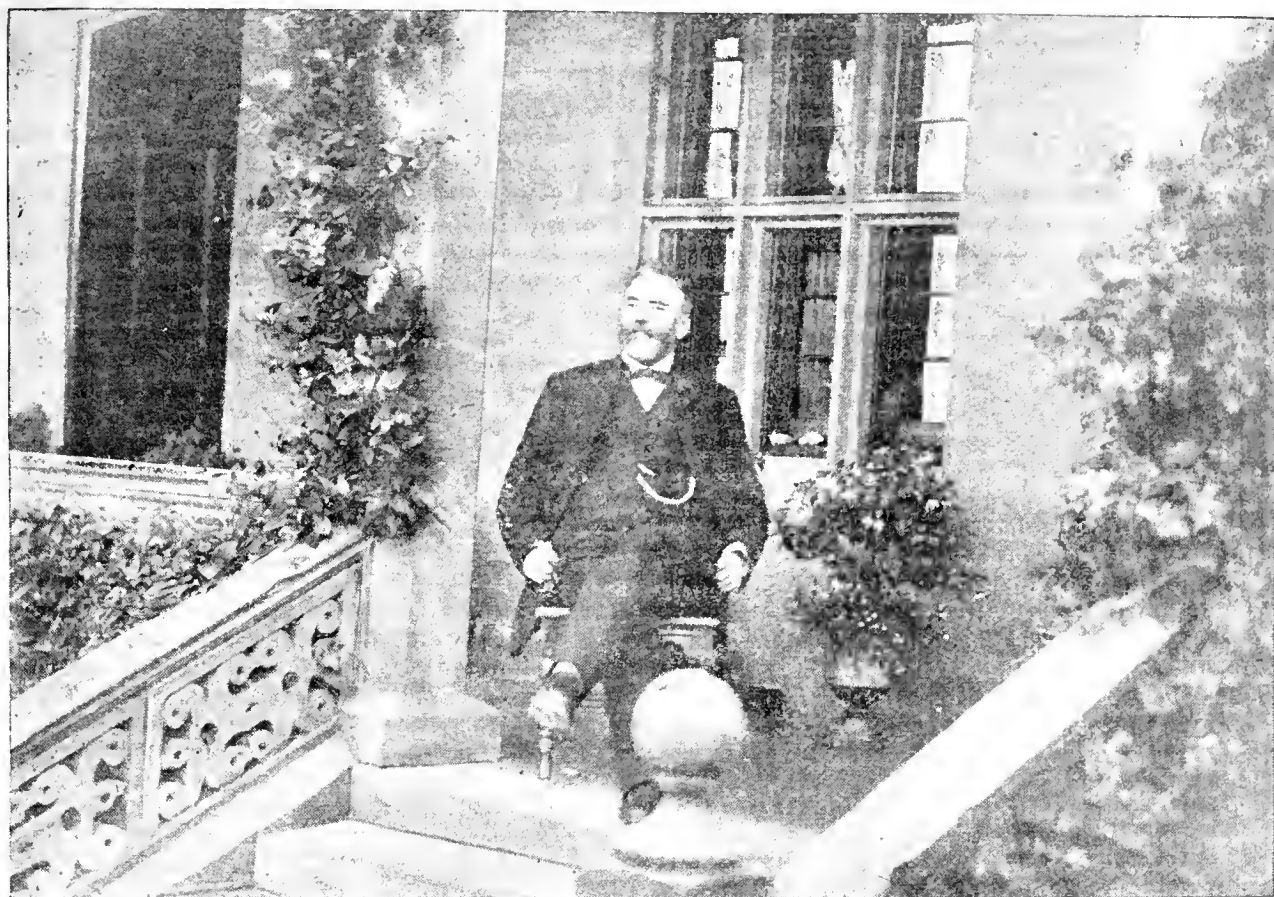
A View of the Gardener's House at Drumlanrig.

would not seriously damage the plants. Fritillaries, about which I wrote recently in these pages, seldom fly into gardens, though they are welcome visitors, beautiful, and speedy on the wing. Probably the likeliest to appear is the silver-washed fritillary, somewhat of a rover. Even the splendid purple emperor has been known to visit a garden, his fine sense of smell, we suppose, informing him of the presence of over-ripe or fallen fruit, since their juices are to him a source of enjoyment.

Conspicuous, if not handsome, is the black-veined white species, with semi-transparent wings, and well-defined blackish or brown markings. This butterfly is said to be fond of the Broad Bean bloom, and, being sociable, it sometimes occurs in parties upon wild flowers in patches, such as Great Ox-eye Daisy. It is rather scarce and local in our island, which is quite as well, so we seldom come upon it about gardens now. Likely, this insect was once commoner, for an old Chelsea entomologist records having seen the caterpillar plentiful upon Hawthorn in hedges amongst suburban market gardens. On the Continent there are many localities where the gregarious caterpillars are abundant, and cause serious injury to the fruit crops some years. They resemble our lackey caterpillars in living under a web at first, becoming full grown in May. Occasionally a clouded yellow butterfly (*Culias edusa*) is tempted into some garden near Clover and Lucerne fields on sunny autumn days. This is handsome and easily recognised, even at a distance, but it is dexterous in avoiding the net.

Place of honour amongst our garden beautifiers belongs to the strong-winged, many-hued butterflies of the Vanessa tribe. Brave and brisk is the red admiral, *V. Atalanta*. His Latin name tells of his speed, and he will fearlessly alight upon a flower close to our feet. This is one of the few butterflies that take excursions after dark, and sometimes it comes to the sugar spread by entomologists. "Admirable" some say the name was originally, and indeed it is to be admired. Both sides of the wings are lovely, the under having a charming combination of grey, pink, and brown. This butterfly appears in gardens as a pioneer of spring. Having hybernated, the summer brood is out during August, and specimens occur till October, if the weather keeps fine. Still more familiar to us is the small tortoiseshell (*V. Urticæ*), which on sunny days visits some gardens by the dozen. It is one of those butterflies which seem to be attached to the residences of man. Specimens often hibernate in sheds, conservatories, and dwelling-houses. The caterpillars live upon the stinging nettle. Not unusually we observe them by parties of hundreds about June. Then we have a large tortoiseshell amongst our native species, but *V. polychloros* is rather local, and unknown in some counties. I have observed individuals visiting gardens in Kent and Hertfordshire. It might be a commoner butterfly, since the females are prolific, depositing each about four hundred eggs, the caterpillars being sociable, and living with us on Elm, Poplar, or Willow. But they may occur on Cherry and Pear, for in France the caterpillars have been so abundant in orchards as to strip these trees.

The peacock butterfly, akin to the preceding, prefers roadsides and open fields to gardens, but it has one favourite amongst cultivated species, and that is the Michaelmas Daisy. When settled upon a flower with closed wings, this butterfly looks almost black. Its beautiful eyes are hidden from view. That capricious dame, the painted lady, which is numerous some years and quite invisible others, is a possible visitor in September or October, when the wild butterflies are getting scarce. Now and then these pretty butterflies abound on Ivy blooms, from which they may be taken with the fingers, so intent are they upon the honey.



Mr. Inglis in front of his House at Drumlanrig.

Our Kentish Hop grounds have lost the comma butterfly, which used to be rather common locally; but the insect is still to be found in some counties. Its caterpillar feeds upon the Red Currant as well as the Hop, so the butterfly sometimes appears about gardens in spring and autumn. The wings are curiously angled. Stragglers from amongst the meadow species of butterfly wander over flower beds, especially the prettily marked *Pyrarga Megæra*, also called the wall butterfly, from its habit of alighting upon walls or palings during its excursions in the sunshine.

Again, we have sundry small butterflies which give liveliness to our flower domain, varying with the season. Very notable are some of the blues, especially *Lycana Icarus*, common from May to September, the males being pure blue, the females blue mingled with brown or grey. Deeper in colour is the azure blue, *L. Argiolus*, flying in May or September. Its little caterpillar lives upon the flowers of Holly and Ivy. Bright and pugnacious is the small copper butterfly, which likes to drive its companions away from flowers. It is fond of those of the *Verbena*, and is about in early summer, also during autumn.—ENTOMOLOGIST.

## SOIL FOR STRAWBERRIES

The New Jersey State Experiment Station (U.S.A.) has made a fruit survey of that State, and reports that for the northern section of the State 65 growers preferred a sandy soil for Strawberries, 18 a clay loam, and 3 slaty soils. In the central section, 57 growers preferred sandy soil and 23 clay loams. In the southern section of the State, where the great majority of Strawberry growers are located, 625 preferred sandy loam and 349 clay loam soils. From the southern section statistics were also obtained as to the yields on the different soils. In 1893 the average yield secured by 290 growers on clay loam soils was 2,909 quarts per acre; on sandy loam soils the same year 240 growers secured an average of 2,508 quarts per acre—401 quarts per acre in favour of the heavier soils. The following year the differences were still more marked. On a clay loam the average yield of 306 growers was 3,223 quarts, while on sandy soil 387 growers obtained an average of 2,359 quarts per acre—a gain of 864 quarts for clay soils. On the whole it would seem that wherever yield is of special importance, clay loams are likely to make the most satisfactory Strawberry beds. For early crops, however, it is advisable to select a quick, sandy loam, southern exposure, and early varieties; for late crops, a northern exposure, clay soil and late varieties.



## Drumlanrig Castle.

Overlooking the picturesque valley of the River Nith in the neighbourhood of the village of Thornhill, in Dumfriesshire, stands the massive pile known as Drumlanrig Castle, the principal Dumfriesshire seat of the Duke of Buccleuch and Queensberry. A stately building it is, the embodiment of strength and solidity, and quite in keeping with the standing of the noble family to which it belongs. Somewhat grim in some of its aspects, and typical in its appearance, as a writer once said, of the feudal power, its sterner features have of late been softened by the mantling growths of Ivy and of *Ampelopsis Veitchi* (*Vitis inconstans*), which give its sandstone walls a gentler aspect, and seem to typify the beneficent influences which were exerted by recent and present owners in the district around. A noble building it is, and vast in its dimensions does it appear as we stand beneath it and gaze at its many-windowed walls. Its erection dates back to the time of the Douglasses, when William, the third Earl, and first Duke of Queensberry, and Lord High Treasurer of Scotland, erected it on the site of an older castle, whose dungeons are said to have been retained for the wine cellars of the new castle. In the old building James VI. of Scotland paid a visit to the Douglasses of Drumlanrig, and the present castle was visited by our now reigning King in the year 1871, while other Royal and distinguished visitors have from time to time been entertained within its walls, both in the time of the Douglasses and since Drumlanrig came into possession of the Scotts of Buccleuch.

The architecture of Drumlanrig is mixed Grecian and Gothic, and has been attributed to the designs of Inigo Jones, though considerable doubt prevails on the subject. It is quadrangular in form, with an open court in the centre, and a square tower, surmounted by ornamental turrets, is placed at each angle of the building. The principal entrance is at the north front, and is approached by a long avenue of fine trees. Under the clock tower, the arms of the Douglasses appear in bold relief. The castle was begun about 1679, and finished ten years afterwards, though it was almost unoccupied from the accession of "Old Q." in 1771 until improved by the late duke in 1827.

Interesting as are the decorations of the interior, its historic pictures, and its traditional "bloody passage," said to be paced nightly by the spirit of a murdered lady, our concern is more with the horticulture of Drumlanrig, and thus we must turn to the gardens and what they contain. These have for long years been cared for by men of the highest standing in the horticultural world, and one need not do more than remind the younger and rising generation of the name and fame of Mr. David Thomson, who is now enjoying his well earned retirement near Dalkeith. The older men well know the position Drumlanrig gardens occupied in his time. His successor, Mr. David Inglis, had no light rôle to fill, but that he has done it well, all who see Drumlanrig at the present time will be ready to acknowledge.

The principal flower garden is situated to the west of the castle, and at the base of steep grass slopes kept in perfect order by the scythe. It is composed of a number of beds in the grass, and so planted as to be full of flower at the time when the family are in residence, which is only for a short period in autumn. Begonias and Violas are largely grown in these beds, the moisture and cool temperature of the locality making these plants very suitable for the purpose. Among the Violas most valued by Mr. Inglis are Walter Welsh, the best of the yellows there, although Bullion is also a great favourite. Nellie is one of the best of the whites, and Mr. Inglis thinks highly of the newer Sir Robert Pullar, a bright, telling blue, which is likely to be much used in the future. Among the large number of others grown are Blue King, Duchess of Fife, Lady Isabel, Primrose Dame, Skylark, The Mearns, and the much prized William Neil. Violette is always good. The annual Triumph Asters are also valued. In this flower garden there is a bordering of *Cotoneaster* in the form of the design on the shawl worn by the late duchess on her marriage day. This is somewhat elaborate, and is kept carefully clipped, with narrow gravel divisions between the various portions of the design. All these beds are admirably kept by the special staff for the flower gardens at the castle. On the same side is a pretty Rose garden; a favourite among

the Roses at Drumlanrig being Fellenberg, which lasts in bloom until an advanced period of the season. There are also Roses and other climbers on the walls of the terraces.

On the east side, what was formerly an American garden, occupied by the shrubs usually found in such, is now partially planted with beds of autumn flowers, among the most useful of these being late Phloxes, which do admirably here, perennial Asters, Rudbeckias, Violas, and *Pyrethrum uliginosum*, all useful, late in the year. In the vicinity of the castle there are many fine trees, the most noteworthy being some fine Yews, which must be of great antiquity, and whose size and age can only be appreciated when one walks among them. Thus seen, they cannot fail to be admired, with their great boughs and venerable aspect. An interesting thing to the writer, was a fine specimen of *Acer Negundo* fol. var., which some in Scotland think tender. This specimen was planted thirty-two years ago, so that its success in a cold place like this may satisfy some doubters. Near the castle is a commodious Palm house, at one time occupied with Camellias, but which now contains a number of healthy, clean specimens of the most popular species of Palms.

The main gardens are situate a little distance from the castle, and occupy a site which is admittedly one of the worst on the estate for a garden. Lying low down in the valley, it is exposed to early and intense frosts, which, with the humidity of the atmosphere, cause horticulture to be pursued under considerable difficulties, requiring both skill and judgment to overcome. An annual rainfall much in excess of most of the south-western Scottish districts is experienced every year, and one year's record reached no fewer than 75 in.; while that of the frost experienced during the intense weather of the winter of 1894-5, was lower than in almost any other part of Great Britain. Dahlias were much blackened when I saw them on September 13, 1901, and some other things showed alike early, the same effects of the winter's approach.

In this garden there were many more flowers than one had expected to see. There are several very fine herbaceous borders, replanted about four years ago, and filled with a variety of plants which have been selected with much judgment, so as to keep up a continuous display from early spring until late autumn. Phloxes do very well and last long in flower, and novelties among these and other good border plants are added from time to time. Asters are also largely grown, and many clumps of the old yellow *A. Linosyris*, assisted by *Rudbeckia speciosa* and other yellow Composites, helped to make the borders quite gay. Sweet Peas and other annuals are also grown in some quantity for cutting purposes. Outside the walled gardens there are also several beds of herbaceous and other flowers. Near these, too, there is a long stretch of arches, forming a pergola, covered with Clematises, Aristolochias, and other climbers. This seems to be an old feature of the garden. Dahlias are also grown to some extent, but Mr. Inglis purposes using more largely than in the past, the old decorative Glare of the Garden for effect in the borders, the modern Cactus Dahlias giving little show for this purpose. As the requirements of the family throughout the year in the way of vegetables are mainly supplied from Dalkeith, culinary produce of this kind is not much cultivated, except for the brief stay of the household at the castle. The most suitable and best types of vegetables are, however, cultivated with success.

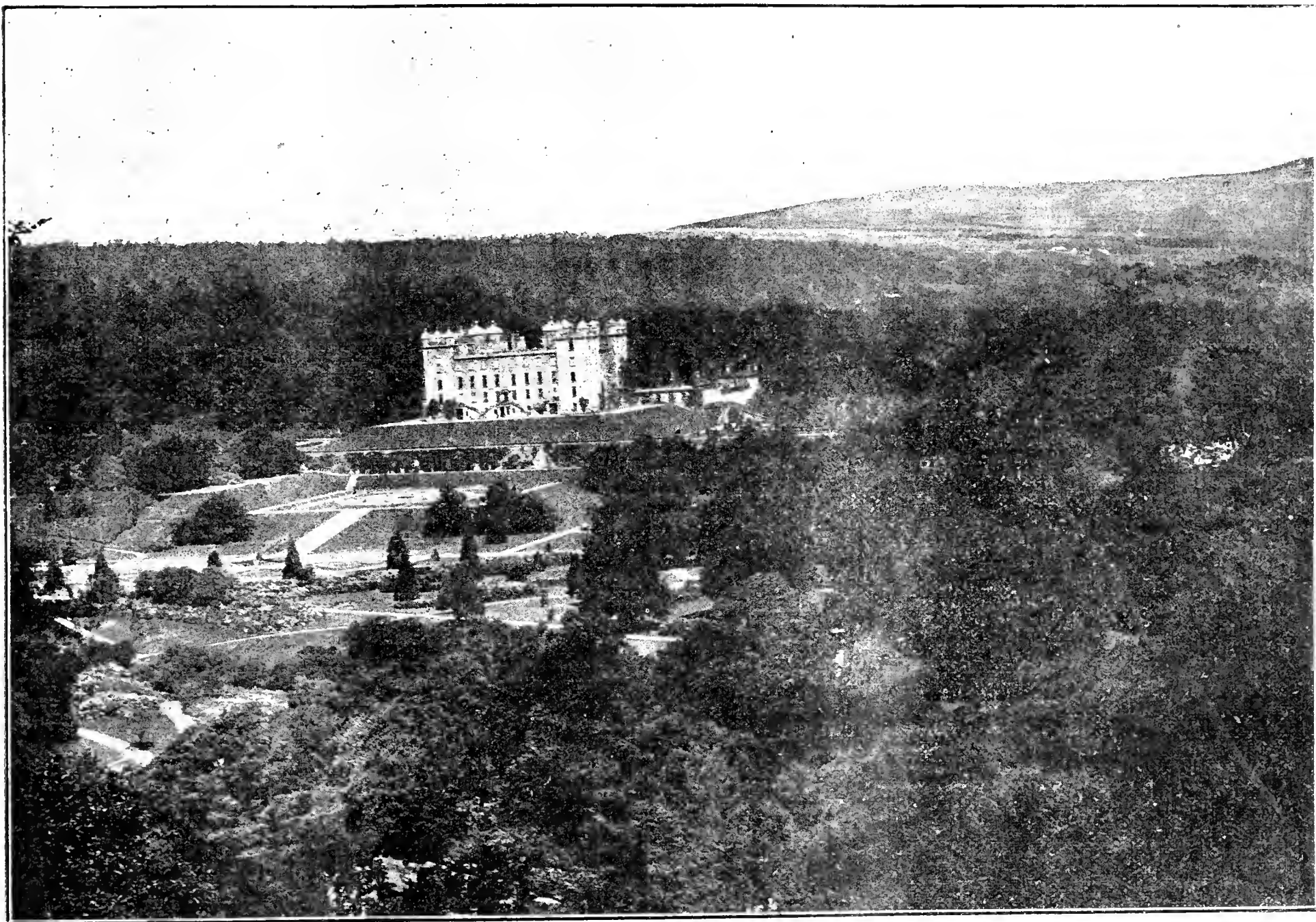
As is well known to readers of the Journal, fruit has always been one of the features for which Drumlanrig has acquired renown. This, however, must be said with some qualification, as neither outdoor Apples nor Pears have given satisfaction, due partly to the soil, but in part the climate. The Pears are not so accommodating as the Apples, and even those on the walls do not satisfy Mr. Inglis. Soon after entering on his duties about eight years ago, he took in hand the planting of young Apple trees with a success which has surprised able gardeners, who did not anticipate good results from the methods adopted. These trees were thus among the things one specially desired to see, and it must be said that they showed surprising results, such as might well be the envy of those in more favoured gardens. All the old and worn-out trees were discarded, and young, healthy trees on the Paradise stock, planted on the surface and mounded up. By liberal feeding, keeping the roots on the surface, and replanting every three years, the trees grow well, bear freely, and colour up splendidly. I noticed, among others, fine crops of such Apples as Queen

Caroline, Warner's King, Gascoigne's Scarlet, Lane's Prince Albert, Bismarck, Graham's Jubilee, the old Galloway Pippin, and especially a tree of Peasgood's Nonesuch, with Apples quite fit to give a good account of themselves on the exhibition table.

The glass department is very extensive, and has all been overhauled, and several capital new houses put up in place of some of the old ones. The Vines have always been well done, and no effort is spared to maintain the reputation of the place for its Grapes. Gros Colman, as grown at Drumlanrig, is the favourite of His Grace the Duke of Buccleuch; but among the other favourites are Black Hamburgh and Muscat of Alexandria. A whole house has been planted with Mrs. Pearson, of which Mr. Inglis has formed a good opinion, and which promises well. Among the others are

under glass, and which showed great promise. Pelargoniums are much grown, and the Zonals, as well as the Show and Fancy varieties, are represented by the latest introductions. Space will not permit of the names of even the best of these. Eucharises attracted my attention from their vigour and absolute health.

This floral department under glass would require an article to itself, as there are so many things to notice, from the collection of cool Orchids being got together again, the deliciously fragrant *Pergularia odoratissima* in the Pine house; *Reidia glaucescens*, *Gloriosa superba*, the lovely old *Callicarpa purpurea*, *Tillandsia zonata*, or such things as *Fuchsia Countess of Aberdeen*, *Heliotropes*, &c. One might have taken notes ad infinitum. All, too, bore the marks of good culture, and the most absolute cleanliness reigned



Drumlanrig from the South.

Duke of Buccleuch, Alicante, Mrs. Pince, and Buckland Sweetwater. Figs are extensively grown. Brown Turkey is the mainstay, and crops abundantly; but others are St. John's or Pingo de Mel, Negro Largo, White Marseilles, and Brunswick.

It was a treat, too, to look through the Pines, and to see such a thriving lot in their various stages. Melons were also good, the favourite being a green fleshed one, raised at Drumlanrig, which is a capital cropper, and of excellent flavour. Among the Tomatoes the most useful is one named Drumlanrig, also raised in the gardens, though Stirling Castle is also found very useful. Other fruit under glass must be passed by, as there are too many things still to remark upon.

The floral department under glass is more extensive and varied than one expected. Chrysanthemums are grown for large blooms to the number of about 1,400, and were ready for housing, all but some of the earlier varieties already

throughout. A good feature was the number of small decorative plants for the table in small pots. Here and there outside, too, in the yards, and on the walls of the bothy, and potting sheds, were interesting shrubs, and it broadened one's estimate of its hardiness to see *Ceanothus azureus* in perfect health and blooming freely there. It may be observed that the smoke from the furnaces and the gas works is carried to a high chimney stack on the hill behind.

One must, however, bring these lengthy, yet for the subject too brief, notes to a close. Yet it cannot be done without a reference to the kindness experienced from Mr. Inglis and the bright family household in his picturesque, flower embowered home, which looks upon the garden over which he presides so well. For this and for the gardening pleasure afforded me I can only express my sincerest thanks, and present this imperfect appreciation of his work.

—S. ARNOTT.





### Apple, Newton Wonder.

In your issue of September 25 you mention that you "believe" Newton Wonder Apple does not do well in Kent, whereas it succeeds well. We have a standard tree, thirteen years planted, that has borne well for some years—8½ bushels on one occasion—and the tree is a magnificent specimen, some 24ft high and 30ft through, the picture of health and vigour. The dwarf trees on the Paradise, commence to bear the second and third years, and they are very happy on this stock. Our original specimen, in basin shape, is full of fine fruit. Our best Kent growers have already found out its value, and we have sold them many thousands. It cannot fail to beat Wellington, as it not only makes a large tree, but is not so subject to damage by severe frosts, mildew, and insects as Wellington is. We have also noted that Bismarck does not do well at Barham Court, Maidstone, although so near us. It grows remarkably well in our nurseries, and is a great success in some orchards near by. It does not possibly like restriction in pruning. The young quarters in our nursery have been so fruitful that they would purchase the ground they stand on. It grows large with us, colours finely, and keeps well into February.—GEO. BUNYARD AND CO.

### Red Spider on Vines.

I should like to state, in answer to Mr. T. Challis' note on page 321, that the atmospheric conditions of the pit were specially attended to, extra air being left on all day. The Crotons were syringed once only, and that in the early morning, and as the day was very fine I need hardly state that there was a very small amount of moisture in the pit. When the lamp was lit, all the crevices were filled with paper, so that none of the fumes should escape. The heat was left on all day to help in drying up the pit. The pipes, which are 3in, and four in number, run through the pit, two of them on the ground level, and 2ft from each other; the other two are at the back and front, and 1ft from the glass. No damping down was done that day, so the experiment was carried out very fairly and honestly. In answer to "C.," page 321, I may say that the XL All was of good quality, as some from the same bottle, and used at the ordinary strength, easily killed green fly. I agree with "C." that we are still waiting expectantly for an article that will kill red spider without damaging fruit, flowers, or foliage. I should not have commented on "H. D.'s" original article, entitled "Seasonable Hints on Vines," which appeared on page 24, but for the fact that I have proved over and over again that this vapouriser does not kill red spider, with me at all events, even when vapourised on two successive nights, at double strength, too; hence my attempt to kill it at twenty-five times the usual strength.—A. JEFFERIES, Moor Hall Gardens, Essex, October 4, 1902.

### Fruit Nomenclature.

The reports on the great fruit show at the Crystal Palace have led me to point out some errors which should not pass without an endeavour to correct them. Apple Potts' Seedling is, in the "Fruit Manual," "Potts's Seedling," and said by Dr. Hogg to have been raised by Mr. Samuel Potts, of Robinson Lane, Ashton-under-Lyne, about the year 1849. In very many catalogues it is entered "Pott's," and in one or two cases "Potts"; the latter would do as well as the entry in the "Fruit Manual," but Pott's is decidedly wrong. Thompson Pear, strange to say, is entered "Thompson's," not only in the "Fruit Manual," but in every other catalogue I have met with (and in the Horticultural Press), except in "Scott's Orchardist," and he entered it "Thompson, Vlesembeek, Van Mons," but as Van Mons was the raiser, it should have been entered "Thompson (Van Mons), Vlesembeek." Dr. Hogg proves this in his notes under "Thompson's," for he states "that it was raised by Van Mons, and being received from him by the Horticultural Society without a name, Mr. Sabine named it in honour of Mr. Robert Thompson."—SENEX, Devon.

[Even the Royal Horticultural Society's schedule of the exhibition of British-grown fruit is not faultless in the matter of nomenclature. Pear, Souvenir du Congrès, is there given as Souvenir de Congrès. A mistake is sometimes made in journals and elsewhere with the name of the Pear Bergamotte Esperen, which is rendered as Bergamotte d'Esperen. Pear Fondante de Thriot may often be noticed as Fondante de Thirriott, which

is wrong; likewise Spencer Nectarine should be Spenser, the name being that of the sixteenth century poet. Peasgood's Nonesuch Apple is frequently written as Peasgood's Nonsuch, and other instances might be given.—ED.]

### Best Quality and Best Forcing Nectarines.

On page 317 I have given Stanwick Elruge as the best quality Nectarine, and Pineapple as the best forcing Nectarine. This is just the reverse of what I intended, as I consider Pineapple the best quality Nectarine, and Stanwick Elruge the best forcing Nectarine. Perhaps some growers may have something to say on the selection of Peaches and Nectarines for the several purposes, and also the best quality and best forcing Peaches and Nectarines.—G. ABBEY.

### Strawberry, Saint Antoine de Padoue.

After three years' culture this excellent autumnal variety has much improved, and we are gathering very fine fruits, some up to 1½in across (cock's combed), of excellent flavour, and they promise a season of some four weeks' supply, which makes a novelty at this season. The older kinds must give way to it, as the "Saint" is a much better bearer, and the fruit larger and of finer flavour. "Just like the first June Strawberries," as a lady said.—GEO. BUNYARD, Maidstone, October 3.

### Carrots on Ridges.

It may not be generally known that Carrots of magnificent form and quality can be produced upon ridges. A trouble hitherto, with me, has been their splitting, but since adopting this system it has been practically eliminated; the Carrot-fly also being less noticeable. After deeply digging, the ridges are made up about 10in in height, and a slight depression made along the top, in which seed is sown. I have already drawn some wonderfully lengthy specimens, and perfectly free from blemish.—S.

### Late Strawberries.

The advantage of cultivating the perpetual bearing Strawberries is now being appreciated, despite the unpropitious weather. I have not yet tried the latest varieties, but St. Joseph and Louis Gauthier are now (October 6) fruiting splendidly. Regarding the latter, these white varieties do not appear to be popular, and never will be, for market work; but for the home garden they should not be omitted. Louis Gauthier this season produced a far heavier crop than any of my forty varieties, the flavour being excellent and the size immense, considering the smallness of other sorts.—SQUIB.

### The Lady Gardener.

The prospects of the citadel of horticulture being razed to the ground by the lady gardener, however humiliating the idea may be, is eminently pleasing. There are many thoughts embodied in such a prospect that certainly claim the attention of everyone who is able to rise above ordinary prosaic sentiment. We leave it to the imagination to depict the pleasing picture one shall find in the rosy future on entering one of our larger gardens, and compare that with things as now existing. This is the lady's realm. The Roman wives are said to have been the keepers of the garden, but the regulation of the Viridarium in some mysterious manner, and at some time unknown to history, passed out of the hands of the lady to the custody of man; and, like tailoring, it got eventually quite beyond the prescribed domains of woman's sphere, till it reached the critical stage it at present is about to experience. Gardeners and tailors (I mean men) were wont to consider this translation of their respective arts, the renaissance. Perhaps they were right, but tailoring and gardening, notwithstanding, are essentially women's arts. And we must admit the facts, sooner or later, and look with complacency at the inevitable—usurping if you like—invasion of women craft into the arena of practical horticulture. And yet it may admit of very much doubt if, after all, the claims of use and wont are capable of adding more superlative honours to the art, for why should women not be as capable to promote and advance the work as men?

Men, we have ample justification in testifying, are not likely to improve matters very much beyond the present state of things, for if we but look about us, the external, as well as the internal, evidences stare us in the face. The spade, the scythe, and the barrow are surveyed by the modern young gardener with something approaching contempt, while the sponge, the scrubber, and washing cloth elicit the fondest smile. After all, there does not seem to be such an alarming difference between the two opposing powers in whose hands hang the destinies of the future of the art of gardening.—C. H. S.

### Wanted—Inventors.

It may be of interest to your correspondents and others to know that "the instrument of torture" of which complaint is made, viz., the ordinary garden barrow, is being abolished in some places, and superseded by an instrument, if not of pleasure, at least one of ease. It is a pleasure to see with what small effort a boy can ply to and fro with heavy loads of plants by the use of the Improved Plant Barrow (particulars of which I enclose on a printed slip), whereas with "the instrument of torture" complained of, two men would have to work hard with less results.—R. E. SANDERS.

Exactly so! More power to you, Mr. H. Muncey, for your sort of a set-on-a-thinking article with which you led off our weekly feed of good things on September 11 (page 235). It was a palate tickler. We gardeners do want a lot, no doubt. "Man never is, but always to be blest." No man knows what a gardener wants so well as the gardener himself. He is, too, as "chokeful of science as old Sol Gills." Does any critic doubt it? Know, then, oh ye of little faith, that it is so, and that it only wants the Muncey method to set it leaking for the benefit of gardeners now and generations yet unborn. Still doubting? Then I'd have you to know that the article swallowed last night is so sudorific in its action that, this morning, it's oozing out of me at every pore; 6 a.m., waiting for the laggards; why tarries the crinch-crunch of their big brogues? Ah! The back tyre—my beloved free wheel—no sooner catches the eye than my hand catches the pump (inflator), one of those celluloid affairs. Wish-shoot, wish-shoot, wish-shoot, just three strokes; grand. A cyclist's blessing on thee, O celluloid man, whoever thou art; but, and to the point, thrice blessed be he by all gardeners who will give us a celluloid syringe. Oh! do, somebody who knows somebody else—some benevolent body in the celluloid trade—do tell him and let us have one, and if it is the success I guess it would be, then call it the Muncey.—Q.

I read with much interest Mr. Muncey's article, and, like him, I think it is high time we had some improvement in our everyday tools. Take, for instance, the lawn mowers; what a drag even the best of them are! Now, this does not come from the mere cutting of the grass, for with well ground knives and a keen sole plate, little weight is required for that. The dead drag comes from the sole bar trailing on the thick turf. To prove this, one has only to turn up a machine and see it polished like the fire-irons. If makers of mowers would keep their sole bar farther back, and higher up in the heel, so as to entirely clear the turf, they would save gallons (!) of sweat, both to man and beast. Only the edge of the sole plate, or bedknife should come in contact with the turf.—J. LORNE, South Park, Rothesay.

### Where is the Todea?

Not so many years ago the Todea formed an important addition to the fernery of almost every well constituted garden. To-day scarce any of the varieties then in repute are to be met with in gardens. Assuming that every effect has a cause, it would be interesting to discover the reason for this falling off in repute of such a graceful and unquestionable requisition in the complete decoration of the fernery. Its culture is by no means difficult—that is, unless it is cultured too much, and that may be possible in some cases, and ought not to be a cause for the complained non-representation in ordinary collections. There may be a more palpable cause in the vagaries of fashion, and perhaps it is to her door the reason must be traced. Fashion truly is a capricious dame, responsible for perhaps more evil than good to gardening.

Raw and loose jointed, a few years ago it was our destiny, like most gardeners, to find our way to the Scottish metropolis, and we lost little time in wending our way to the then celebrated Lawson nurseries. While most of all we saw was new and full of interest to a country boy, nothing took us with such force as the long span-roofed Todea pit. The sight was truly magnificent to us then, still is, and possibly ever shall be, for we do not think it easily could be rivalled. The plants were ranged along either side of the footpath which went up the middle of the house. The long graceful pendant fronds fell down the walled sides of the path, almost touching the ground. Not the less beautiful were those former denizens of the Antipodes, when often in winter their delicate fronds could be seen encased in ice, and hanging therefrom countless icicles. Todea superba comprised the greater number, and perhaps the most imposing, though there were one or two other varieties represented. The Todea being a Filmy Fern, it requires perfect shade and ample overhead moisture. This necessitates a small corner specially for itself in the fernery, hence probably another serious obstacle to its general distribution in gardens. Still, this latter reason is not sufficient, for in most places such a trivial obstacle could easily be removed. It is to be hoped that the Todea will yet return and become a universal favourite among the beautiful though flowerless class of which it is a subject.—D. C.

### The Fern Mite.

In reply to "Trem," page 307, I can truly sympathise with him in having charge of thousands of Ferns infested with the mite, more particularly as he is growing them for the market. It is quite bad enough to have a few solitary plants so infested, but when it amounts to thousands, and relying on them for a living, it becomes a most serious matter, and from what I saw of Mr. Nash's Ferns already referred to, I felt certain that what his were troubled with was not a solitary case, as what had affected him would make its appearance elsewhere, and that is why I sent my paper for publication in these columns. At the present time I cannot say if the mite that "Trem" has been fighting is the same variety as the one that Mr. Nash has been troubled with, and I would be glad if "Trem" will oblige by sending me a plant or two in pots, as grown—the worst infested plants he has got—carefully packed, to 21, Church Road, Wimbledon, so that I may ascertain if it is the same insect. The plants should have some young fronds just bursting up from the crowns, as it is on these that the insects are found, and to which the mischief is done, as immediately the fronds get slightly hardened the insects return to the crown of the plants to infest the next fronds that appear. These, in turn, are crippled before being developed.

As I have already stated, these insect pests are new to me. Mr. Nash is a nurseryman, and the loss of a quantity of Ferns just at a time he expected to turn them into money was a serious matter, and in looking through his houses I noticed a batch of them looking very stubby, the upper portions of the fronds having been cut off and the lower ends left. In the majority of them more than half the fronds were gone, and what remained had just the appearance as described by "Trem" on page 307. I at once inquired what was the cause of it, to which Mr. Nash replied, "We are puzzled to know. We believe it is an insect. We have fumigated and used all kinds of liquid insecticides, but nothing seems to stop them, and now we are applying a liberal use of the syringe to see what effect that will have," &c.

I brought away a plant, and after examining the soil and roots I found the insects seated in the crown of the plant and on the tenderest fronds, and under an objective of high power could fully define the insects, also their eggs in various stages, and by referring to my books I was able to identify them as the *Macrobiotus Hufelandi*. Having found out what it was, the next thing was to know its natural habitat, i.e., under what conditions it lived and thrived. It is figured in the *Micrographic Dictionary*, and described "as being found upon mosses growing on walls, stones, at the foot of trees, &c." It is also described in the "Manual of Zoology," by Nicholson; but more fully so in volume 6 of Messrs. Cassell's "Natural History," where it is described in the order of Tardigrada commonly known as bear or sloth animalcules, found in moss and in wet places.

The mouth is suctorial, and they are distinguished from all other Arachnidae by being absolutely hermaphrodite. The single ovary containing its eggs is always visible in the hinder part of the body, and at the posterior end of it are placed the male organs, both sets opening into a dilatation of the intestinal canal, &c. They live sometimes in water, but more frequently in moss, in damp places, and some of them are found especially in a rather curious locality, viz., in the gutters of the roofs of houses, and have the power of resisting desiccation. They may be found apparently quite dry among the sandy dust of a gutter, and will revive at once on being duly moistened.

Having found out the natural habitat of the insects, the next question is, What will destroy them? and, seeing that they thrive in moist places, points at once that insecticides in a fluid state are practically useless. Also, as they infest the crowns of the plants and the tenderest growth of the fronds, fumigation is hopeless. I therefore advised giving the plants a thorough good watering and then dust the crowns completely with tobacco powder, or any other strong insecticide in a powdered state, and repeat the dusting after the next waterings.

The plants began to thrive, and were soon in saleable condition. I will here say the insect, being hermaphrodite, i.e., the male and female organs existing in the same individual insect, it therefore has the power of reproducing itself as long as it lives or one is left; and although the cultivator may burn all his plants, a legion of the vermin may be left lodged under the wall plates, in the walls, under the stages, or in the gutters of his houses, to sally forth and infest batch after batch of his plants; hence the necessity of not only cleaning the plants, but every particle of the house in which the infested plants are grown in.

The eggs of the insects are situated in them as described, and are discharged three at a time in a very thin coating or sack. They are of a beautiful pale green colour, and it is most interesting to watch the young insects relieve themselves from the egg itself, after which the coating, or sack, that contained



the eggs has the appearance of a tiny bit of scarlet thread. After reading "Trem's" letter I paid Mr. Nash a visit to see if he was quite free from the vermin, but there were several plants that are infested now, and I am quite convinced that it is no easy matter to stamp it out after it has got a firm footing; no half measures will do it.

As regards the *Oribata demersa*, it is a totally different insect, although it exists under similar circumstances, and from the effect they had on the *Aspleniums* they appear to be as bad an enemy; but after a free use of the tobacco powder on the crowns the plants began to grow, and were soon sold out. The *Oribata* are described in the last edition of "The Microscope," by Carpenter, as "vegetable feeders, living in moss, lichen, fungus, dead wood, under the bark of trees, &c., and some few species on aquatic plants. They are widely distributed, from the Arctic regions to the equatorial."

I hope "Trem" will send me a plant, and after finding out under what circumstances his enemy thrives he will have a better idea as to what remedy to apply, and if I can be of any service to him by way of advice I shall only be too pleased to give it.—J. OLLERHEAD.

## Book Notices.

### The Natural History of Plants.\*

The "Natural History of Plants," by Professors Kerner and Oliver, is so well known that one hardly requires to describe its extent and treatment. As a popularly and lucidly written work on the nature, work, functions, and relationship of plants, it is almost indispensable in the gardener's library. It is a scientific work, yet one whose style is attractive, and which unfolds the history of vegetable life in a way as interesting as any story of human achievement. Four parts, each of about 110 pages (10in by 7in) have been issued in this reprint, and there are twelve more monthly parts. It is a useful book, too, for reference, and heartily we commend it to the notice of gardeners, the young men especially. The printing, paper, and illustrations are alike excellent.

### Vegetables and Flowers from Seeds.†

The cultural directions furnished for the different vegetables and flowers treated in this book are sufficient for all who have a fair practical acquaintance with flower and kitchen garden crops. After presenting the necessary advice on matters of practice, the following in reference to Carrots is how their wants in other climates are summarily recorded:—"For Egypt and other countries immediately south of the Mediterranean, October is the sowing season for main crops of Carrot, but the time can be greatly extended under irrigation. In Australia this is one of the most popular roots grown. Seed can be sown successively from February until September, and it is desirable to mix with the Carrot seed a few seeds of Turnip or Radish, which come quickly and mark the rows. To ensure the retention of moisture the soil must be made firm. Where the land is cold, three weeks elapse before germination.

"In South Africa, garden sowings of Carrot seed are made from August until October, and on a large scale from January to March. For the Argentine Republic, winter and spring are suitable for sowing seed, but there is no difficulty in maintaining a succession by a series of sowings extending through the entire year."

In regard to Leeks, there is the following paragraph:—"In the Himalayas, Kashmir, China, Japan, and Canada, seed should be sown immediately frost has gone, or perhaps a little earlier, on a hotbed, under protection at night. May, June, and July are the months for South Australia. In South Africa, temperate South America, India, Burma, and Ceylon sowings may be made at an altitude of 2,000 feet in August, and at the sea level in November. During October, the interval of calm between the south-west monsoon and the north-east current is the trying period for young plants of all kinds."

Little is said of the culture and behaviour of the Brassica and Turnip tribes in tropical or even semi-tropical countries; fuller information in this respect would have added to the value of the book. Perhaps, too, a summary statement of the climate and physiography of the main divisional features of the globe would also have added character to the book. It will prove a useful book for colonists without doubt, and we commend it to the notice of those who are in foreign parts, or who are about to go. It is brightly illustrated to the highest quality paper, the typography being excellent, and a good index is included. The price is not stated, but may be 5s. net. (pp. 331, 8½in by 5½in.)

\* "The Natural History of Plants," Kerner and Oliver. Blackie & Son, Ltd., London, Glasgow, Dublin. Price per part, 1s. 6d. net.

† "Vegetables and Flowers from Seeds in Tropical, Semi-Tropical and Temperate Climates," by Sutton and Sons. Published by Sutton and Sons, Reading, England.

## PERENNIAL ASTERS.

The season of Michaelmas Daisies is now reaching its zenith, and but for them the garden would be much less bright than it is. During hard weather, when sharp frosts and early snowfalls have checked or killed nearly every other herbaceous plant, one can still rely on the continued flowering of the perennial Asters until the middle of November. Their culture requires but little note; they enjoy good treatment, and fair attention in such matters as thinning and tying the shoots, mulching during the summer if the soil is light and poor, and for such care the plants will return a bright display of beautiful flowers and dark, healthy leafage. The illustration of a posy of perennial Asters on page 341 exhibits forms of species of the genus, including *A. ericoides*, at the top, with small flowers; *A. acris*, the starry bunch beneath it; *A. Amellus* var., the largest flowers in the figure; *A. cordifolius* var., at the top right-hand corner; and *A. Novæ-Angliæ* var., the bottom right-hand blooms. *A. Novi-Belgi* is another well marked species, whose many varieties, with itself, form "a section" in the horticultural classification. The following are good varieties worthy of cultivation in gardens:—*CORDIFOLIUS*: Photograph, Diana, elegans, major, albus, and magnificus. *AMELLUS*: cassubicus, latifolius, amelloides, Onward, bessarabicus, Framfieldi, and Riverslea. *NOVI-BELGI*: T. S. Ware, Arcturus, Calliope, Harpur Crewe, Madonna, Candida, formosissimus, William Marshall, and Robert Parker. *NOVÆ-ANGLIÆ*: Diadem, Mrs. J. F. Raynor, præcox, Pæcicité, roseus, William Bowman, and ruber. Other good sorts are *Coombe-fishacre*, *Tradescanti*, *vimineus*, *ericoides densus*, *grandis*, *levigatus*, *ptarmicoides*, and Councillor W. Waters.

## Societies.

### Royal Horticultural—Drill Hall, Oct. 7th.

The meeting of Tuesday last was typical of the autumn season, there being quite an abundance of hardy flowers, Dahlias, and fruit and vegetables. Messrs. J. Hill and Son had a group of the Bird's-nest and other handsome Ferns, while Mr. John Russell, of Richmond, filled the centre of the hall with a varied collection of Ivies, all in pots, and trained as standards, bushes, and columnar specimens. From Dobbie and Co., Rothesay, came fifty basket-lots of Potatoes, in as many distinct sorts. These we refer to under Fruit and Vegetable Committee. Two collections of fruit were presented, one from Mr. J. H. Goodacre, gardener to Earl of Harrington, at Elvaston Castle Gardens, Derby, and another from Mr. W. Fyfe, gardener to Lady Wantage, Lockinge Gardens, Wantage, who also staged a collection of vegetables as a section of the same exhibit. Chrysanthemums from Mr. J. Surman, of Beckenham, and Messrs. Wells and Co., of Redhill, Earlswood; while Messrs. F. Cant and Co., and B. R. Cant and Sons, furnished each a magnificent collection of cut Rose blooms. Mr. R. W. Green, seed grower, Wisbech, who grows specially for the trade, staged a collection of newer varieties on this occasion, each being meritorious, and which we may again refer to. Messrs. E. A. White, Limited, Beltring, Paddock Wood, Kent, sent a collection of Apples on branches, the fruits and foliage all very clean and bright. The "Spimo" improved fruit tree wash had been used on the trees.

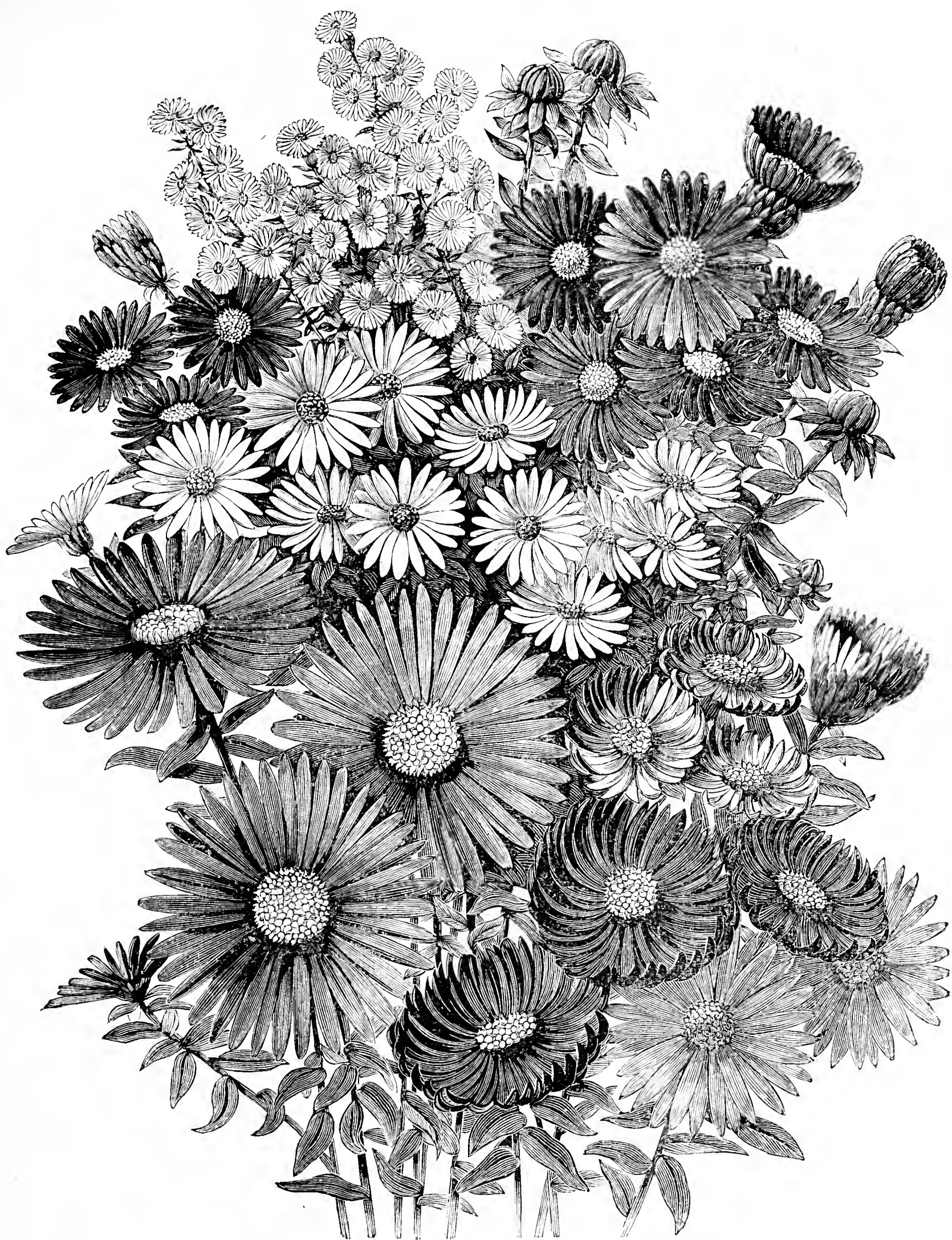
### Floral Committee.

Present: W. Marshall, Esq. (in the chair); with Messrs. H. B. May, Chas. T. Drury, J. Hudson, J. H. Nix, Chas. Dixon, J. Jennings, Geo. Gordon, Chas. Jefferies, H. J. Cutbush, C. J. Salter, Chas. E. Pearson, R. C. Notcutt, W. P. Thomson, Wm. Cuthbertsen, J. H. Fitt, C. R. Fielder, E. T. Cook, R. M. Wallace, and Ed. Mawley.

Messrs. Ware, Limited, contributed, amongst their varied collection of Asters, the pretty white multiflorus, and the lavender-purple *A. N-B.* T. S. Ware. Aster Wm. Bowman was also showy, and so too, Mrs. Raynor. Among Cant's Roses were bunches of Killarney, Mme. Pierre Cochet (a deep W. A. Richardson), Billiard et Barre, golden orange; Safrano, tea-coloured; and the charming Rosette de Legion d'Honneur.

Messrs. Cheal and Sons (Crawley) group showed how much better it is to stage only a few bunches of Asters, and stage them well, than to fill a whole table with small bouquets closely packed. Their selection included *A. multiflorus albus*, *A. Amellus bessarabicus*, *A. Harpur Crewe*, *A. N.-A. rosea*, and the handsome *Helonium autumnale striatum*. They had a very fine collection of Dahlia blooms, Pompon, single, and Cactus.

F. A. Bevan, Esq. (gardener, Mr. H. Parr), Trent Park, New Barnet, brought up a collection of Michaelmas Daisies, and from Messrs. J. Peed and Sons, of Norwood Road, London, S.E., also came these Asters, with Dahlias and hardy flowers in general.



CHOICE PERENNIAL ASTERS.



Mr. John Forbes, Hawick, Scotland, was south with some of his specialities, as Pentstemons, Phloxes, Carnations, and Begonia Caledonia in pans. His strain of Pentstemons proved to be an advanced and good type. We may name the following as good varieties: James Farquhar, J. Ramsey, Dragoon, Mrs. Oliver, Pres. Carnot, Mrs. Dawson, Edward Tyndale, J. N. Troup, Mrs. Roberts, and Royal Standard. Among Phloxes were Sylphide, Sheriff Ivory, John Forbes, and Wm. Ramsey. One of the best Carnations was the dark red Royal Standard.

The Shirley Nurseries, Southampton, sent their quota of hardy flowers, and Messrs. Barr and Sons, of King Street, Covent Garden, massed perennial Asters, Gladioli, Kniphofias, Acers, and Geraniums. A bright and varied group. Mr. Amos Perry had also a choice group in this line.

In Messrs. Wells' group, we noted the following as being especially noteworthy: Goacher's Crimson, Orange Masee, Chas. Jolly, Mme. Liger Ligneau (golden), Mytchett Beauty, Roi des Précocés, Alf. Fleuret, and other decorative varieties. Twelve specimen blooms were staged in front, including Mrs. T. W. Pockett, Miss A. Byron, W. R. Church, Rayonnante, Mme. Von Andre, Mrs. W. Popham, Miss E. Fulton, and Mutual Friend.

A splendid exhibit of freely flowered Begonia Gloire de Lorraine, came from Ronald Keep, Esq. (gardener, Mr. S. Pym), Woollet Hall, North Cray, Kent, whilst Messrs. Cutbush had Carnations, and Mr. Prince Roses.

#### Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair); with Messrs. J. O'Brien, de B. Crawshay, H. Ballantine, F. A. Rehder, E. Hill, H. T. Pitt, G. F. Moore, T. W. Bond, F. W. Ashtott, W. Boxall, W. H. Young, H. A. Tracy, H. Little, Wilson-Potter, and N. A. Bilney.

Orchids were fairly well to the fore. Messrs. Veitch and Sons, Limited, Chelsea, staged hybrid Lælias and Cattleyas, including *L. splendens*, bearing three large flowers on one sheaf; *L. pacuvia*, *L.-c. Bryan*, with four beautiful flowers; *L.-c. Ophir*, a bright cinnamon-yellow bigener, with purplish throat; *L.-o. Hermione*, very large and well coloured; and *L.-c. Aphrodite*, with a grand velvety-purple lip.

H. T. Pitt, Esq. (gardener, Mr. Thurgood), exhibited a group of strongly flowered Odontoglossums, these exhibiting great variety of colour, and were highly interesting. The rare *Dendrobium Victoria Regina* in flower was shown, and also a certificated *L.-c.*, viz., *Iris*, Rosslyn var.

W. C. Walker, Esq. (gardener, Mr. G. Gragg), Bercy Lodge, Winchmore Hill, N., deserved a full measure of praise for the magnificently flowered and healthy Odontoglossum crispum contributed by him. One plant had two racemes, each bearing a dozen massive flowers, and others had single racemes with fourteen flowers.

Messrs. Charlesworth and Co., Heaton, Bradford, sent a few choice Orchids. They had *Sophro-Lælia Heatonensis*, *S.-c. Eximia*, and the hybrid *Cattleya Iris*, amongst other things.

Mr. Hudson, of Gunnersbury, received a Cultural Commendation for a handsomely flowered *Dendrobium formosissimum gigantea*. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, with *Cattleya intermedia flava*, *Oncidium incurvum*, *Cattleya x Firefly*, and *Lælia Harrisoni*, furnished a good show. Other exhibitors staged separate small exhibits.

#### Fruit and Vegetable Committee.

Present: George Bunyard, Esq. (in the chair); with Messrs. H. Balderson, Jos. Cheal, Geo. Woodward, J. W. Bates, S. Mortimer, Alex. Dean, Edwin Beckett, Horace J. Wright, H. Markham, H. Esling, G. Reynolds, F. Q. Lane, J. Smith, C. G. A. Nix, H. Somers Rivers, A. H. Pearson, and O. Thomas.

The Grapes, Melons, Apples, Pears, and Gages from Elvaston were samples of high culture and great attention in treatment.

Messrs. Dobbie and Co.'s Potatoes, which we have already noted, included the following typically good varieties, amongst others:—The Factor, very clean and beautiful; Harbinger, British Queen, Dobbie's Favourite, The Crofter, Pride of the Ochils, Sharpe's Victor, The Sirdar, Sir J. Llewellyn, Maincrop, Duke of York, Snowdrop, Ideal, Dobbie's Improved Kidney, Myatt's Ashleaf, and Duke of Rothesay among the white-skinned, kidney-shaped varieties; and among the coloured Potatoes were Herd Laddie, Eightyfold, Purple Perfection, Edgemoor Purple, Reading Ruby, and The Dean amongst purples; Waverley, Mr. Bresee, Lord Rosebery, and Reading Russet, among pinks. The general verdict of experts was that no finer collection had ever been seen in the Drill Hall, and, indeed, it would be hard to stage or see a finer collection at any time.

Lady Wantage's fruit collection included well coloured and finely shaped white and black Grapes, with Melons, Apples, Peaches, Plums, Pears, Figs, Nectarines, a cone of *Monstera deliciosa*, and a dish of Morello Cherries. Red Ampelopsis foliage was strewn over the white table covering, and the long shoots wound round the various fruit stands. The collection was very creditable, and admirable in every way. The vegetables, too, were clean, crisp, and fresh.

#### Medals.

FLORAL COMMITTEE.—Gold Medal for group of garden Roses to Messrs. F. Cant and Co., Colchester. Silver-gilt Flora for group of Tree Ivies to Mr. J. Russell, Richmond. Silver-gilt Banksian for Asplenium, &c., to Messrs. Hill and Son, Lower Edmonton; for hardy flowers to Mr. Amos Perry, Winchmore Hill. Silver Flora for early flowering Chrysanthemums to Messrs. W. Wells and Co., Earlswood; for Carnations, Phloxes, &c., to Mr. John Forbes, Hawick, N.B.; for hardy flowers to Messrs. B. Ladhams, Southampton; for autumn Roses to Messrs. B. R. Cant and Sons, Colchester. Silver Banksian for Dahlias to Messrs. J. Cheal and Son, Crawley; for Roses to Mr. G. Prince, Kingston Bagpuze. Bronze Flora for Begonia Gloire de Lorraine to Ronald Keep, Esq., N. Cray, Kent. Bronze Banksian for Michaelmas Daisies to F. A. Bevan, Esq., New Barnet. Silver Banksian for perennial Asters to Messrs. Barr and Sons, Covent Garden, and Messrs. Ware, Limited, Feltham.

FRUIT COMMITTEE.—Gold Medal to Messrs. Dobbie and Co., Rothesay, for fifty baskets of Potatoes; to Lady Wantage, Lockinge Gardens, Wantage, for collection of fruit and vegetables. Hogg Medal to Lord Harrington, Elvaston Castle Gardens, Derby, for collection of fruit. Silver Knightian Medal to Mr. R. W. Green, Wisbech, for sixty varieties of Potatoes.

ORCHID COMMITTEE.—Silver-gilt Flora to H. T. Pitt, Rosslyn Gardens, Stamford Hill, for group of Orchids. Silver Flora to Walter C. Walker, Winchmore Hill, for group of Orchids. Silver Flora and C.C. to James Veitch and Sons, Limited, Chelsea, for group of hybrid Orchids. Silver Banksian to Charlesworth and Co., Heaton, Bradford, for group of Orchids.

#### Certificates and Awards of Merit.

*Cattleya x Firefly* (Hugh Low and Co.).—Flowers of moderate size, but of great elegance; pale mauve colour. Award of Merit.

*Chrysanthemum*, *Joseph Lowe* (Mr. G. Shawyer).—A bright and deep yellow Japanese variety. Flowers medium, compact, and rounded in form. Award of Merit. From Cranford, Hounslow.

*Lælio-Cattleya x Iris*, Rosslyn var. (H. T. Pitt, Esq.).—Quite distinct, with petals very broad in the centre and rounded, the velvety purple lip is frilled and silvery-edged, and is broad in front. A close-built flower. Award of Merit.

*Lælio-Cattleya x Madame Chas. Maron* (Baron Schröder).—The parentage is *C. Warszewiczii* x *L. Digbyana*. An immense flower, measuring 7 or 8 in across from tip to tip of the sepals. The colour is very light and bright lavender mauve with a suspicion of pink. The lip is fringed, bold and handsome, with a yellow throat. First-Class Certificate.

*Melon*, *The Peer* (Mr. J. H. Goodacre).—A white, deep-fleshed, juicy fruit. The skin is yellow, and finely netted. It is a cross between Countess and Beechwood. The seed cavity is very small. It is heavy, and one of the finest flavoured varieties we have tasted. Award of Merit.

*Pear*, *Michaelmas Nelis* (Geo. Bunyard and Co.).—The raiser's description is as follows:—"Small, first-class quality; a deliciously sweet melting Pear—free grower and bearer—sent out last year for the first time; there is no other so good in its season. Quince. Season, September-October." Award of Merit.

*Sopro-Lælia x Heatonensis* (Charlesworth and Co.).—An interesting and decidedly attractive bigener, of sharply defined form. The sepals are very pointed, 2½ in long, and tapering. The petals are oval acuminate, slightly sinuous at the apex, and, like the sepals, are rich dark crimson. The lip is long, narrow, and protrudes forward. Colour purple. First-Class Certificate. From Heaton, Bradford.

#### National Chrysanthemum, Oct. 7th, 8th, and 9th.

The early autumn exhibition of the National Chrysanthemum Society, held on Tuesday, Wednesday, and Thursday of this week, in the Royal Aquarium, Westminster, was in every way successful. The whole available space on the ground floor was occupied with groups and boxes of cut flowers, also collections of fruit and vegetables, all of which added to the interest of the show. Mr. Deverill's vegetable classes were well filled, and nice samples were displayed. The decorations were very good this year, though some of the classes were not supported, so far as we could discover. These were few, however, and keen competition was the rule. Amongst the specimen blooms on view there were fine samples of Mrs. T. W. Pockett, H. A. Barratt, Lily Mountford, Alice Byron, Rayonnante, Mrs. R. Darby, Mrs. G. Mileham, Godfrey's Triumph, King Edward VII., Sir W. Acland, and Charles Longley. The well-known supporters of the society were forward in strength. To Mr. R. Dean, in particular, a word of acknowledgment is due.

For a group of Chrysanthemums and foliage plants there were two entries. Mr. W. Howe, gardener to Lady Tate, Park Hill, Streatham, was easily first with well-coloured flowers and a beautiful variety of foliage, which included some well-coloured Crotons and Ferns. Mr. R. C. Pulling, Monkham's Nurseries, Woodford, was second with larger flowers, which exhibited signs of bad damping, while the coloured blooms were poor in colour. The

front was composed of *Pteris tremula* and *Isolepis gracilis*, the back being composed of Bamboos.

For twenty-four blooms Japanese, in not less than eighteen varieties, there were four competitors, the average of the blooms being above the usual standard seen at this particular show. Mr. J. Brooks, gardener to J. W. Newman, Esq., Totteridge Park, Totteridge, Herts, securing the first prize with plenty in hand. His varieties were Mrs. T. W. Pockett (a fine specimen), Miss Alice Byron, Soleil d'Octobre, Florence Molyneux, Mr. H. A. Barratt, Madame Gustav Henry, Mrs. R. Darby, Chas. Longley, Lady H. Clark, Lily Mountford, Madame Alice Capitant, Mr. L. Remy, Mrs. G. W. Palmer, Rayonnante, Mrs. G. Mileham (good), Mrs. Greenfield, M. V. Venosta, and Lady Crawshaw. Mr. G. Impey, gardener to H. Mansfield, Esq., The Lodge, Abbots Road, New Barnet, was second with good flowers of Millicent Richardson, Mrs. R. Darby, Lady Audrey Buller, Edith Pilkington, Mrs. J. J. Thorneycroft, and Madame Gustav Henry, while Mr. N. Davis brought up the rear, staging good flowers of J. R. Upton, Charles Penford, Mrs. Harry Emmerton, Kimberley, and Baden Powell.

The class for twelve blooms, Japanese, distinct, there were no less than six entries, the first prize being awarded to Mr. H. Perkins, gardener to the Hon. W. F. D. Smith, Greenlands, Henley-on-Thames, for a level board, decidedly above the average for an October show. His varieties were Sir W. Acland (a grand flower), Jane Molyneux, Mrs. J. Bryant, George Lawrence, Mrs. W. Popham, Seedling, Lady Acland (a good yellow), Madame A. Capitant, Seedling, Graphic, Seedling, and Mary Perkins. Mr. James Brooks was second with a weaker display, his best varieties being Madame Gustav Henry, Rayonnante, Mr. L. Remy, and Lily Mountford; and Mr. M. Rayment, gardener to W. Beech, Esq., North Ockenden, Romford, third.

Class 4, for six blooms, distinct, only produced four exhibitors, the first position being taken by Mr. R. C. Pulling, Monkham's Nurseries, Woodford, who staged moderate blooms of Lily Mountford, Madame Von Andre, Evelyn Douglas, Madame G. Henry, May Vallis (good colour), and Mrs. Greenfield. Mr. J. Childs, gardener to Mrs. Foss, The Priory, Totteridge, Herts, who had good blooms of Rayonnante, Soleil d'Octobre, and Lady Crawshaw, was second, Mr. S. Foster, gardener to R. Nivison, Esq., Tenterden Hall, Hendon, being third.

For six blooms, incurved, not less than three varieties, there was only one entry, from Mr. Jas. Agate, Brockhampton Nurseries, Havant, who was awarded the first prize for a good board at this season, his varieties being Mons. R. Baluant, Lord Coleridge, and Matthew Russell.

In the class for twelve bunches of early flowering pompons, not less than eight varieties, there were three competitors, the first prize falling to Mr. Eric F. Such, nurseryman, Maidenhead, who staged a good lot of disbudded flowers, the varieties being Pink Martinmas, Bronze Martinmas, Peach Martinmas, Blushing Bride, Madame E. Lefort, Mrs. Cullingford, Strathmeath, Longfellow, and La Vierge, a splendid exhibit but very misleading as to the decorative value of the varieties for garden decoration. Mr. T. L. Turk, gardener to T. Boney, Esq., Southwood House, Highgate, was second with good bunches of Mrs. Cullingford, Miss Davis, and Alice Butcher; Mr. Charles Brown, gardener to R. Henty, Esq., Langley House, Abbots Langley, third.

In the class for six bunches of early flowering pompons distinct, not disbudded, there certainly was a much better display than the previous class. Here Mr. D. B. Crane, Archway Road, Highgate, scored with splendid bunches of Anastasia, Alice Butcher, Flora, Mrs. Cullingford, and Fiberta; Mr. E. Such following with nice fresh bunches of Martinmas, Madame E. Lefort, and Peach Martinmas; Mr. Charles Brown being third.

The class for a pair of vases to contain twelve blooms, large flowering varieties, brought four entries, which formed a capital display, the premier award going to Mr. James Brooks, who staged two splendid vases of specimen blooms. Mr. J. Kirkwood, gardener to E. Wormald, Esq., Grass Park House, Finchley, was second with rather weaker flowers, though well arranged, and Mr. N. Davis third.

For one vase of six blooms, one variety, yellow, there were no less than six competitors, Mr. R. C. Pulling leading with superb blooms of Mrs. T. W. Pockett. Mr. H. Perkins followed with Mary Perkins, a Japanese of the incurved type, while Mr. F. Bush, gardener to W. F. Lister, Esq., Rose Hill, Totteridge, was third.

There were seven contestants in the class for six blooms, white, one variety, and the premier prize was allotted to Mr. G. Impey, gardener to H. Mansfield, Esq., The Lodge, Abbots Road, New Barnet, who staged a fine vase of Madame Gustav Henry, Mr. R. C. Pulling following with the same variety, while Mr. Jas. Brooks brought up the rear with another honour for Madame Gustav Henry.

In the class for any other variety, one variety only, there were five entries, Mr. R. C. Pulling securing leading honours with a good vase of Lily Mountford. Mr. Jas. Brooks was second with paler blooms of the same variety, while the third place was secured by Mr. H. Parr with moderate blooms of Mrs. A. H. Hall.

The entries for class 12, which read as one vase of early flowering Pompons with suitable foliage, brought out five entries, the first being awarded to Mr. D. B. Crane, Mr. T. L. Turk being second, and Mr. S. Foster third.

For twelve bunches, distinct varieties, from plants grown in the open and not disbudded, there were four entries, the first prize going to Mr. D. B. Crane for a splendid exhibit of naturally grown bunches. The varieties were Horace Martin, Madame Marie Masse, Ivy Stark, Mrs. Cullingford, Henri Yvon, François Vuillermet, Harvest Home, Ralph Curtis, Lemon Queen, Crimson Marie Masse, and Bronze Prince. Mr. Eric Such was a good second with nice bunches of Bronze Masse, Lemon Queen, Horace Martin, and Crimson Queen, and Mr. H. Parr, gardener to F. A. Bevan, Esq., Trent Park, Barnet, made a good third.

For one vase of early flowering white variety there were seven entries, Mr. D. B. Crane being first, Mr. W. F. Fisher second, and Mr. F. Gilbert third, all staging Madame Desgranges.

Class 16 brought out no less than nine entries, Mr. Eric J. Such winning first prize. Mr. D. B. Crane was second, with a beautiful vase of Harvest Home, and Mr. J. Kirkwood third.

#### Decorative Exhibits.

These seemed fresher, richer, and better than usual. Eight competed for the hand basket of garden flowers. Mr. Norman Davis easily led, and second, Miss C. B. Cole, Feltham. Mr. M. V. Seale came third. The latter won in class 22, for a hand basket of Chrysanthemums; second, Mr. N. Davis; and third, Miss Cole. For a vase of Chrysanthemums in class 26, the leader was Mr. A. Robertson, gardener to F. J. Yarrow, Esq., Mitford House, St. John's Wood; second, Mr. F. G. Oliver, 97, Tollington Park, N.; third, Mr. T. L. Turk, Southwood House, Highgate. Six entered. For a hand basket of autumn foliage and berries the prizes fell as follows: First, Miss Cole; second, Mr. Seale; and third, Mr. A. Taylor, East Finchley.

The amateurs turned out well in their division. In the class for twelve blooms, distinct, there were three entries, Mr. A. Robertson, gardener to F. J. Yarrow, Esq., Mitford House, St. John's Wood, being first with a board of well coloured blooms, the best being Madame Von Andre, Mutual Friend, Soleil d'Octobre, Sensation, Madame Gustav Henry, and Pride of Madford. Mr. J. Childs, gardener to Mrs. Foss, The Priory, Totteridge, was second, with nice blooms of Rayonnante, Mr. A. H. Barratt, and Soleil d'Octobre; while Mr. M. Rayment came in for third place.

Class 28 was for six blooms, Japanese, distinct. Here there were four entries, Mr. A. Robertson winning first honours with a good level board. His varieties were Madame Von Andre, Mrs. J. Bryant, Mutual Friend, Australie, Madame Gustav Henry, and Sensation. Mr. J. Farrow, gardener to G. R. Peerless, Esq., Park Hill House, Clapham, was second, and Mr. J. Childs third.

The class for twelve bunches of Pompons was only represented by two competitors, Mr. T. L. Turk winning handsomely with an excellent exhibit, the best varieties being Martinmas, Alice Butcher, Miss Davis, Lyon, and Madame E. Lefort. Mr. F. Gilbert, gardener to M. N. Battenshaw, Esq., Blackheath Park was second.

Class 30 was represented by three entries, which compared favourably with the rest of the show. Mr. E. Brown, jun., Southampton, secured first place, having good flowers of Soleil d'Octobre, Mrs. G. Mileham, Lily Mountford, and General Buller. Mr. Thomas Smith, Cobbold Road, Leytonstone, made a good second with Soleil d'Octobre, Madame Gustav Henry, Mrs. White Popham, and Edith Pilkington as his best flowers; Mr. Martin Silsbury, Shanklin, Isle of Wight, being third.

#### New Varieties Certificated.

*Black Prince*.—Fine large crimson flower, golden reverse, very free, splendid habit. F.C.C.

*Nelly Blake*.—A seedling from Madame Desgranges, of a very pleasing shade of crimson, slightly taller than the parent, though identical in habit. F.C.C. Both from Mr. G. Shawyer, Cranford, Hounslow.

*Mary Perkins*.—A soft yellow Jap. F.C.C. From Mr. H. Perkins, The Gardens, Greenlands, Henley-on-Thames.

#### Medals Awarded.

The following awards were made to non-competitive groups:—

Gold Medals to Hobbies, Limited, Mr. H. J. Jones, H. Low and Co., J. Berwick, H. Cannell and Sons, and W. J. Godfrey. Silver-gilt Medals to Messrs. Cutbush and Son, H. Spooner and Sons, J. B. Coldwill, R. Forster, and E. F. Such. Silver Medals to H. Deverill, J. Peed and Son, and G. Shawyer.

#### Non-competitive Exhibits.

Mr. W. J. Godfrey, Exmouth, Devon, contributed an interesting display of his last year's novelties, including Godfrey's Masterpiece, Exmouth Crimson, Mafeking Hero, and Edward VII, all of which were large, deep, and good. A capital new seedling was seen in Britannia, a rich canary yellow. He also staged a number of good decorative sorts, with Carnations in the centre



of the group, and plants, *Fuchsia triphylla* var. Marg. and F. t. Furst Otto, both good things, the former deep crimson, the latter pink.

Messrs. Hobbies, Limited, Dereham, produced a truly autumn display of Dahlias and Roses, the former predominating, and the Cactus section occupied the premier position, the arrangement being light and attractive. The most conspicuous varieties of the latter being Loogaen, Galliard, J. W. Wilkinson, Fred. Cobbold, Mrs. E. Mawley, Winsome, Gabriel, Lottie Dean, Mrs. J. P. Clarke, Khaki, and Alpha. The Pompons comprised a good general stock, and the Roses the best of the autumn flowering varieties.

From Mr. H. Berwick, Sidmouth Nurseries, Sidmouth, Devon, came a good collection of Apples and Pears, the former displaying more colour than has been apparent during the present season, the most noticeable being The Queen, Keswick Codlin, Lane's Prince Albert, Emperor Alexander, Peasgood's Nonesuch, Gascoigne's Scarlet, and Bismarck. The Pears were undersized, but a representative display was staged.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, arranged a table of Liliiums, Begonias of the Gloire de Lorraine type, some beautiful Crotons, and a few Dracænas with Palms and other appropriate plants, the whole forming a pleasing group. Messrs. Hugh Low and Co., Bush Hill Park, also contributed a good display of Apples tastefully arranged with a few flowering Ericas, Oranges in fruit, and Palms.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, arranged an exhibit of Chrysanthemums, Palms, and autumn flowering plants grouped in three bays in his well known style; in the Chrysanthemums the chief varieties were George Laurence, Miss Elsie Fulton, Mrs. Greenfield, Miss Emma Fox, Mrs. G. Mileham, Nellie Bean, Frances Connor, and a collection of Asters, Zonal Pelargoniums, early flowering Chrysanthemums, arranged tastefully with Palms, Bamboos, and Ferns.

Messrs. W. Cutbush and Sons, Highgate, contributed a large display of Dahlias, which consisted of Cactus, Pompon and single varieties, all the most modern forms being represented, Messrs. Peed having Begonia blooms from the open air.

Mr. J. B. Coldwill, Sidmouth, Devon, staged a bright collection of Apples, Pears, and Tomatoes, all exceedingly clean and handsome. Messrs. H. Spooner and Sons, Hounslow, had also a creditable fruit display, embracing typical samples of the best varieties. Mr. H. Deverill from Banbury, brought a charming assortment of Zonal Pelargoniums staged in bunches; and Messrs. Cannell and Sons had their beautiful Cannas. A group of Chrysanthemums came from Mr. R. Forster, of Nunhead Cemetery, and another exhibit of early flowering sorts from Mr. Eric F. Such, Maidenhead.

#### Deverill's Prizes for Vegetables.

Class A: Six of Banbury Tankard Onion.—Mr. J. Bowerman was first, Mr. R. Lye second, and Mr. H. Folkes third.

B: Six of The Autocrat ditto.—Mr. W. Grithlam, of Newbury, was first here; second, Mr. T. F. Hakey, of Hemel Hempstead; and third, Mr. J. Bowerman.

C: Twelve of Ailsa Craig.—Mr. H. Folkes led, Mr. Bowerman was second, and Mr. N. Kneller third.

D: For six of the same variety.—Mr. Folkes again wrested premier honours to himself, and second, Mr. R. Lye. Class E, for the best dozen of a selection, Mr. Folkes beat Mr. Lye.

F: For six Exonian Leeks, Mr. E. Beckett was foremost; second, Mr. Folkes; and third, Mr. C. Brown, Abbots Langley. There were six entries.

G: Three lots of Carrots (Exhibition Scarlet) were on view. Mr. R. Noller, White Lodge, Oxford, led; Mr. R. Lye, second; and third, Mr. F. Allford, Earlestone, Devizes.

H: Five sets of twelve Middleton Park Favourite Beet were staged. Mr. R. Lye was leader; second, Mr. Folkes; and third, Mr. E. Beckett.

In class L Mr. T. A. Beckett beat Mr. W. Woodcraft, Banbury.

J: For the best dozen fruits of Deverill's Glenhurst Favourite Tomato, four entered. Mr. E. Beckett was first, Mr. J. Bowerman second, and Mr. H. Folkes third.

K: For a collection of eight kinds of vegetables five competitors came forward with handsome displays. The honours fell in the following order:—Mr. E. Beckett, Mr. H. Folkes, Mr. J. Bowerman, and Mr. Charles Brown. Each staged fine clean samples, and took care to place on view to the best advantage.

#### Scottish Horticultural.

The monthly meeting of this association was held on Tuesday evening, the 7th inst., in No. 5, St. Andrew Square; Mr. Comfort, president, in the chair. After preliminary business, and the election of a number of new members, a paper was read from Mr. Brown, gardener at Houston House, Renfrewshire, on "Growing of Vegetables for Exhibition." Mr. Brown's paper was a very practical one, and detailed his methods of growing the leading sorts of vegetables, which usually grace the exhibition table, with great ability and clearness. A very interesting discussion followed, and a very hearty vote of thanks was accorded to Mr. Brown. There were an unusually large number of

exhibits on the table, of a most attractive character. Chief among them was a splendid collection of early flowering Chrysanthemums in about forty varieties, embracing the best and newest of existing sorts, including Parisiana White, Mytchett White, Goacher's Crimson, Horace Martin, and a beautiful seedling, Golden Gem.

Mr. M. Cuthbertson, nurseryman, Rothesay, exhibited a beautiful collection of new varieties of Cactus Dahlias, and a number of beautiful autumn blooming herbaceous plants, including Harpaliums, Montbretias, Tritomas, Lobelias, &c. Mr. Todd exhibited from his garden at Musselburgh a very beautiful vase of Lady Fitzwygram Chrysanthemum, and a handsome vase of Roses, remarkably good for the season, chiefly Caroline Testout and Ulrich Brunner. Mr. Todd had also Goacher's Crimson Chrysanthemum in fine condition, and splendid giant Mignonette, with a grand collection of Sweet Peas in over thirty varieties, which were marvellous for the late period of the season. The collection embraced all the leading and newer sorts. These were awarded a cultural certificate and a special vote of thanks.

Mr. Johnstone, of Hay Lodge, exhibited a beautiful plant of Tillandsia. Mr. J. C. Young, Fettes Row, exhibited a beautiful bronze sport from Casimir Perier Chrysanthemum, which was awarded a first class certificate. Mr. Dunn, Dalkeith, exhibited Amaryllis Belladonna in beautiful condition, from the open air. A vote of thanks was accorded to the exhibitors.

#### Royal Caledonian Horticultural.

The following is a letter from the president of this society, which has been issued as an appeal to the Scottish people who are lovers of the garden, or professional gardeners, to join the ranks of, and assist the society:—

Kennet, Alloa, September, 1902.

"Sir or Madam,—I beg the favour of your reading the short statement I enclose. It puts in a concise form the aims of the Royal Caledonian Horticultural Society, of which I have the honour to be president. The committee are most anxious to secure an increase in the membership of this society, and as a national institution it seems to me to have great claims upon the consideration of all Scotsmen who are interested in horticultural matters. I venture to express the hope that you will allow your name to be enrolled amongst its members.—I am faithfully yours,

BALFOUR OF BURLEIGH."

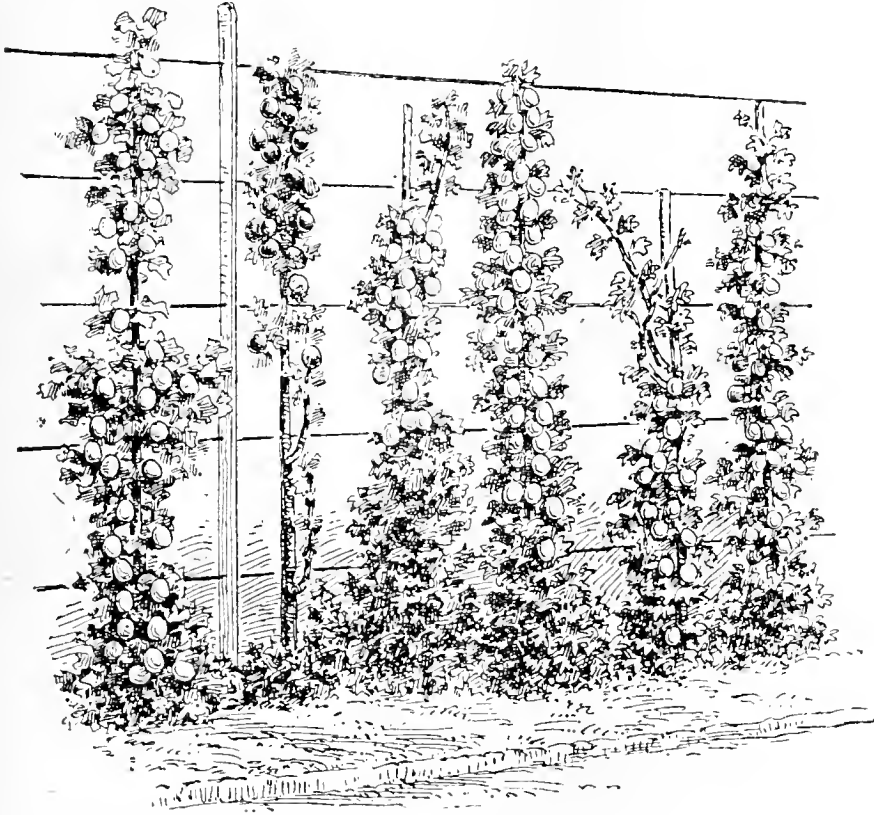
"This society was founded in 1809 to encourage and improve the cultivation of fruits, flowers, and vegetables in Scotland, and the records of the society show good work done. It is nearly 100 years old, and may be said to be the parent of all other such societies in Scotland. The society holds two or more shows each year in Edinburgh, at which exhibits from all parts of Great Britain and Ireland are received free; also from the Continent and America. The shows are largely competitive, but the trade also exhibit well. There are thus brought before the Scottish public and horticulturists the best examples of the produce of the gardens of the United Kingdom, and also new and little-known plants. Even as an educational institution the society has very strong claims to be supported. The educative feature is kept in view in the preparation of the prize schedules, and competent judges have declared that the society's exhibitions are among the best of their kind. To maintain the society's usefulness it is necessary to have a strong membership. The council rejoice in the rapidly increasing strength of the sister society in England (the Royal Horticultural), but, at the same time, desire to take this opportunity of soliciting and urging Scottish people to support also their National Horticultural Society. Those desiring to become members may be enrolled on application to the secretary on any of the following conditions:—Two guineas, one guinea, or half-a-guinea annually. These annual subscriptions may be commuted by one payment of twenty guineas, ten guineas, or five guineas respectively." The name and address of the secretary and treasurer is P. Murray Thomson, S.S.C., 5, York Place, Edinburgh.

#### Liverpool Amateur Gardeners.

There was an excellent attendance of members at the monthly meeting, held in the Common Hall, Hackins Hey, on October 2. The large hall was devoted to a capital assortment of fruit, flowers, and vegetables; the cut blooms for the special prize being won by Mr. Robins with a collection comprising herbaceous plants, Roses, &c., fit to grace any table. Some capital Apples and Pears came from Mr. R. Muir, of Formby. Mrs. Stevenson had the best table plants—a Chrysanthemum in bloom, a splendid "Phenomenal" Fuchsia, 7ft high, in a 7in pot, and a basket containing well coloured Tomatoes and two bunches of Grapes, grown in a roof greenhouse in the midst of the city. For the latter she received full points and certificate, and rightly so, for it is the result of perseverance and good work. Mr. Thomas had good Apples and vegetables, and Mrs. Morris the special for a plant in bloom.

In the lecture room, the chair was occupied by Mr. Ellison,

who introduced Mr. R. Pinnington to give his lecture, entitled "Seasonable Hints." Mr. Pinnington, who spoke entirely without notes, gave a capital object lesson on the right and wrong system of fruit tree pruning, also the evils resulting from deep planting and the lack of moisture at the roots in early autumn and spring, stating cases of failure which were alone attributable to the want of root-pruning. Useful advice was tendered in the matter of storing and preparing Pears for exhibition, and especially recommended the cordon principle of growing. Dealing with Roses, he advised amateurs to go over the trees and to remove all their useless shoots at the present time, as it tended to assist the growths left. Liliums he advised being purchased as early as possible, potted in a good sound loam, leaf mould, and coarse silver sand, the pots to be well drained, filled three parts full, plunged up to the rims in ashes in frames, and sheltered from severe frosts. By this means scarcely any water would be required until growth commenced, when top-dressing would be necessary.



**Cordon Gooseberries.**

He was most severe on the use of too much manure being mixed in the bulb compost, preferring to give liquid stimulants when root action was good, and condemned the use of too large pots for single Hyacinth bulbs. Mr. A. W. Ardron spoke in high terms of the lecture, and Mr. Cangle seconded, Mr. Pinnington afterwards answering several questions.

### **CORDON GOOSEBERRIES.**

Gooseberries may be grown as standards, espaliers, wall-trained, or bush specimens; but there is no form by which finer fruit is obtainable than the single cordon. Gooseberry cordons can be grown 6ft to 8ft long, and have the whole length of the shoot covered with fruit. It is doubtful if there is any kind of fruit-growing by which so much can be secured from a given space, unless it be cordon trees of some other fruit. Mr. Molyneux once estimated in these pages that an acre of ground planted with Gooseberries on this system would yield £135, and this not one year in three or four, but three years out of every four, and a fair crop the fourth. Cordons are usually 1ft to 2ft long when bought; they can be trained horizontally or erect.

East and west walls are the best for them, especially the latter, as in this aspect the sun does not shine upon them when the frost is on the bloom, and early fruit can be obtained. Cordons may also be planted on wire trellises running east and west, where they will be found to grow and fruit well. They may be planted 9in to 1ft or more apart. The ground should be previously well enriched with basic slag or farmyard manure. There is no fear of their running to wood; the stronger the wood the better the fruit. When Gooseberries have been in bearing a few years they are much benefited by having an inch, or even 2in of rich soil placed over their roots in place of the old soil, which may be removed. Ripe Gooseberries may be enjoyed from the middle of June to the middle of September by cultivating early sorts like Golden Drop, Early Green Hairy, and Wilmot's Early Red on a south-west wall; and late sorts like Ironmonger and Warrington Red on a north wall.



### **Fruit Forcing.**

#### **PEACHES AND NECTARINES: EARLIEST HOUSE.—**

The trees are now leafless, and should be overhauled for pruning, dressing, and readjustment of the growths. Where due regard has been paid to disbudding, preventing overcrowding, and removing the useless growths after the fruits were gathered, very little pruning will now be required. Weakly and unpromising branches, however, may often be advantageously cut out in favour of sturdy, short-jointed growths, and unduly long shoots be shortened so as to originate vigorous ones from them at the proper place for covering the trellis evenly with bearing wood. The house should be thoroughly cleansed, woodwork with carbolic soap, water, and a brush, glass with clear water, and the walls limewashed, with a handful of sulphur to a pailful, the sulphur being first formed into a paste with skim milk. The trees should also be washed with an insecticide, those advertised being excellent for the purpose, or paraffin emulsion,  $\frac{1}{2}$ lb to three gallons of water, adding 1oz of sulphide of potassium (liver of sulphur) as a fungicide, applying with a brush, and taking care not to dislocate the buds. Likewise the border needs attention, removing the mulching or loose surface soil, pointing over very lightly, and supplying fresh loam, but not covering the roots more than 2in. About a quart of some approved fertiliser, such as those advertised for fruit trees, may be mixed with a barrow-load of loam, to which a fifth of well rotted manure has been added, and the manurial elements will get diffused through the soil by rains or watering, and be available as food when the trees start into growth. The roof lights may remain off until late November or the approach of severe weather, frost and snow sometimes interfering with their replacement.

**SUCCESSION HOUSES.**—The foliage in these is quite green, being later in being shed than in hot seasons. The growths, however, are firm, and the buds quite prominent enough in the axils of the leaves. Too much air cannot be admitted, but it is necessary to reduce the ventilation on cold nights, or close the house in case of severe frost, which may cause the sudden collapse of the foliage and prejudicially affect the buds. Any trees that are unsatisfactory should be root-pruned or lifted as soon as the foliage is matured sufficiently, or when it gives indications of falling. In the case of young trees making a late growth it will be advisable to form a trench at a distance from the stem equal to almost one-third the spread of the branches, detaching all roots down to the drainage, leaving the trench open for ten days or a fortnight, when it may be filled firmly; this checks growth and contributes to the maturity of the wood and buds. It also encourages the formation of fresh rootlets, insuring a fibry formation of them, which will decidedly benefit the setting and stoning of the fruit, as the tree is better nourished provided it is present in the soil. Care must be taken not to allow the soil to become dry in the part undisturbed.

**LATE HOUSES.**—The wood which has borne fruit may be cut out and thinned where too crowded. The structure may be kept rather close by day when there is sun, throwing the house open at night, which will assist the wood to ripen and concentrate the tree's energies on the buds. In cold localities a gentle warmth in the pipes in dull weather will facilitate the ripening process, but it must be accompanied by a free circulation of air.—**ST. ALBANS.**

**HOUSING OF RIPE GRAPES.**—Hamburgs and all thin-skinned varieties of Grapes require frequent examination for the removal of decayed berries. Damp being their great enemy, it should be prevented by a circulation of air constantly, the employment of fire heat in daytime, accompanied by free ventilation, allowing the house to cool before night, and admitting air the following morning sufficiently early to allow the atmosphere to heat gradually, and thus being warmer than the berries, moisture will be deposited upon them.

### **Kitchen Garden.**

**LIFTING ROOT CROPS.**—The prevalence of brisk, dry weather affords an excellent opportunity for lifting and storing the crop of Carrots, Beetroot, summer Turnips, and late Potatoes. It is important that the roots, also Potatoes, be thoroughly dry before storing, hence it is advisable that no more be lifted in one day than can be removed under cover by evening. As much of the tap root as possible must be secured with the Beetroots, and the tops should be twisted off about 2in above the crown, which prevents bleeding. The tops of Carrots may be cut off to within an inch and a half of the fleshy crown, and little or



none of the tap root preserved. Treat Turnips similarly. Very dry sand, soil, or wood ashes are excellent materials for storing roots in, but the place of storage must be dry, or they will absorb the moisture to a great extent. Store Potatoes on a wooden floor, and cover with clean, dry straw. Carrots, Turnips, and Beetroot may be placed in layers between any of the dry materials above referred to.

**OUTDOOR TOMATOES.**—Any Tomatoes still remaining outdoors ought to be cut, stem and all, and placed in a dry, warm position under glass to fully ripen. Many of the small, green fruits will not colour, but those that are tinged when the stems are cut will gradually do so under the influence of artificial warmth.

**LIFTING ENDIVE AND LETTUCE.**—Unless favoured with a sheltered, warm spot some of the fully grown plants may be lifted and placed in frames, though the same object will be attained if glass lights, elevated on bricks or blocks of wood, are used to cover them. Protection at the sides is not needed. Cold will not harm them, but continued wet causes the hearts to rot.

**BLANCHING ENDIVE.**—There are several methods of blanching, without which Endive is of little practical use. Those varieties having sufficiently long outer leaves may have these drawn together over the centre, and tied together at the points. This will help the hearts to blanch, especially if large pots are placed over, with the hole stopped up to exclude light entirely. The curly, short leaved varieties may be blanched by laying a slate or tile over the plants, placing it on them when the plants are dry.

**LEEKS.**—Many of the most forward plants have advanced to a sufficient size when they may be earthed up so as to thoroughly blanch the stems as high as possible, at least as high as the bottom leaves. A soaking of liquid manure may be given before the final earthing, as well as to later plants still progressing in growth. Shorten the straggling ends of all the leaves, cutting the basal leaves closer. The finest Leeks are grown in trenches, in which they are readily fed and soil added.

**PARSLEY.**—It is important to have a good supply of Parsley during the winter and early spring months. Plants from an early summer sowing should now be in good condition, being furnished with luxuriant, short-jointed leaves. Some of the strongest of these plants may be lifted and potted, standing the pots in a sheltered position outdoors until later in the year, when place in a cool house. A Parsley bed may often be sufficiently protected by laying lights over when the weather sets in hard and frosty, usually in December. The bed of young plants from an August sowing should be kept clear of weeds and dead leaves. Severe thinning of the plants which are small is not necessary at present.

**DUTCH HOEING.**—The soil between the rows of Spinach, autumn sown Turnips, Lettuce, Onions, and Cabbage should be freely hoed over, so as to maintain a fresh, sweet surface, and to destroy seedling weeds. The hoeing admits warmth and air, thus promoting steady and healthy growth.

**POTATOES.**—The prevalence of disease among the crops in various parts of the country will necessitate extra attention being paid to examining the tubers from time to time. Although the greatest care may have been expended in picking out affected specimens at the time of storing, it is wise to look over them again, so as to maintain the stocks of the various varieties as sound as possible.—EAST KENT.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.                  | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|------------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|                        |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                        |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.                  |                    |                         |           |           |           |             |                                       |                |                |                              |
| September and October. |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ...28           | E.N.E.             | deg. 55.9               | deg. 50.7 | deg. 58.2 | deg. 46.0 | Ins. —      | deg. 55.0                             | deg. 56.1      | deg. 56.5      | deg. 35.5                    |
| Monday ...29           | E.N.E.             | 51.9                    | 49.0      | 55.9      | 45.5      | —           | 54.5                                  | 56.0           | 56.3           | 35.0                         |
| Tuesday ...30          | N.E.               | 52.4                    | 47.9      | 56.5      | 47.5      | —           | 53.8                                  | 55.6           | 56.2           | 39.0                         |
| Wed'sday 1             | E.N.E.             | 55.4                    | 50.6      | 59.2      | 50.0      | 0.03        | 54.0                                  | 55.3           | 56.0           | 46.2                         |
| Thursday 2             | E.N.E.             | 51.9                    | 48.9      | 53.1      | 50.2      | 0.02        | 54.1                                  | 55.3           | 56.0           | 45.8                         |
| Friday ... 3           | E.N.E.             | 44.7                    | 41.2      | 49.1      | 42.4      | —           | 52.3                                  | 55.0           | 55.8           | 33.2                         |
| Saturday 4             | E.N.E.             | 45.9                    | 42.1      | 48.6      | 43.2      | —           | 51.5                                  | 53.8           | 55.7           | 32.0                         |
| MEANS ...              |                    | 51.2                    | 47.2      | 54.4      | 46.4      | Total. 0.05 | 53.6                                  | 55.3           | 56.1           | 38.2                         |

The days have been dull and dark, with cold biting north-easterly winds.



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**BOOK WANTED (J. D.).**—It would be entirely unnecessary to publish a book on the subject of grouping Chrysanthemums and that only. Any gardener with experience, or without experience, but with good, sound judgment and a perception of what is tasteful, can arrange groups. We have given illustrations through the Journal of good groups. We will endeavour to furnish a descriptive article soon which may be of use in affording you suggestions.

**GRAPES AND LEAVES FOR IDENTIFICATION (A. A. T.).**—The Grapes are only about two-thirds the size in berry of Madresfield Court, and the leaves are not rugose, as that variety is. It certainly is a late Grape of first-rate quality, and we think West's St. Peter's, though the foliage is large for this variety, but that may be owing to the vigour of the Vine, and the veins of the leaves are not red. The leaves of West's St. Peter's usually die off yellow, but sometimes they are highly coloured, of which we notice the latter in one of your leaves, the other being without traces. Certainly Madresfield Court would not so change from the house being kept too hot; indeed, it would ripen about same time as Muscat of Alexandria and Alicante.

**SCALE INSECTS ON PALM LEAF (T. L.).**—The long narrow coccid (scale) has been designated the black thread scale (*Ischnaspis filiformis*, Douglas). The species was first discovered in this country by Mr. Douglas in 1887, since when it has been gradually on the increase, and now occurs in many parts of the British Isles. Unfortunately, it is a very pernicious pest, and most difficult to destroy in the adult stage. In its young stage, however, it is comparatively easy to kill, and frequent sponging, spraying, or dipping should be resorted to. The ordinary paraffin and soap emulsion has met with the best results. (See Journal Royal Horticultural Society, vol. xxiii., pp. 219-262.) Nothing but the hydrocyanic gas treatment will kill the old scales, which are insoluble in potash. The Palm leaf is also attacked by the so-called black seed scale (*Ceraataphis lataniae*), easily distinguished by the pure white fringe; but this is a true aphid, although it bears a striking resemblance to a coccid.

**FORMING LEAF MOULD (Cantab.).**—The leaves now falling should be gathered into a heap, a place being selected where they can be spread rather thinly, so as to prevent any excessive heating by fermentation. The whole should be turned over occasionally so as to expose all parts in turn to the influence of the weather and air. Where air cannot reach leaves that are of a somewhat hard, dry nature, such as Beech, Oak, and Spanish Chestnut, their decay is exceeding slow unless there are softer textured leaves intermixed to hasten decomposition. Water may be applied artificially for the purpose, but it never has the same effect as rain, and if a large heap is made this latter cannot penetrate far into the interior. The leaves should be collected free from sticks and bark if possible, as these are liable to encourage fungoid growth, which may render it more or less useless for plant cultivation. The time taken in reducing leaves to a mould or fine soil depends greatly on the amount of turning over and other attention devoted to the preparation. Much may be effected in the course of a year, or even less, but the quality is usually better if a longer time is allowed.

**SAVOY STEMS AFFECTED WITH CABBAGE FLY AND CLUBBING (J. R.).**—The attack of the cabbage-fly, *Anthomyia brassicae*, of which we found some maggots, has no doubt been greatly accelerated by heavy manuring; indeed, the maggots live in dung as well as feed on Brassica tribe underground stems, and the season being a wet one has probably favoured the maggots—at any rate, your specimens show the attack to have been severe. The clubbed root is due to attack of club-root fungus, *Plasmodiophora brassicae*, and for both the root-maggot and clubbing a dressing of gas lime is the best preventive. It should be applied as soon as the crop is cleared off the ground at the rate of 2½ to 5 tons per acre, and should be fresh from gas works, spreading evenly, and left on the surface a month or six weeks before ploughing in. If cleared in autumn the heavier dressing may be given, and if intended as a preventive on new ground the lesser amount may be applied in late winter

or early spring, leaving at least a fortnight on the surface before ploughing in. Instead of using the manure you name, we advise an artificial dressing at seed-time of 3 cwt superphosphate mixed with 1 cwt of bonemeal; top-dressing, after singling out, with 2 cwt of nitrate of soda per acre mixed with 3 cwt of salt. The land evidently lacks lime, or is surfeited with the animal manure.

**NAMES OF FRUITS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (T. J. R.).—Grape, 5, Black Morocco. Pears—1, Clapp's Favourite; 2, Williams' Bon Chrétien; 3, Jalousie de Fontenay; 4, Emile d'Heyst. (J. D.).—1, Allington Pippin; 2, Hornmead's Pearmain; 3, Emperor Alexander; 4, Red Streak; 5, Ribston Pippin. (A. T.).—1, Lady Sudeley; 2, not recognised; 3, Annie Elizabeth. (B.).—White Muscadine. (L. M.).—1, Tower of Glamis; 2, Mrs. Gladstone; 3, Worcester Pearmain; 4, Bramley's Seedling.

**NAMES OF PLANTS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (Hutton).—*Calceolaria mexicana*, not nearly largely enough cultivated, a pretty little border annual. (T. J. R.).—1, the Grey Poplar (*Populus canescens*); 2, *Mesembryanthemum* sp.; 3, *Mesembryanthemum cordifolium variegatum*; 4, *Veronica Andersoni* variegata; 5, *Centaurea candidissima*; 6, *Polemonium caeruleum* variegatum; 7, *Cornus alba*. (T. J. R.).—1, *Itea virginica*; 2, *Juniperus chinensis* var.; 3, *Cupressus (Retinospora) Lawsoniana*, var. *erecta-viridis*; 4, *Rhus typhina*; 5, *Biota orientalis* var.; 6, *Hibiscus syriacus*; 7, *Berberis nepalensis*; 8, *Cupressus obtusa* compacta; 9, *Juniperus chinensis albo-variegata*; 10, *Pernettya mucronata* (type). (Water Weed).—The aquatic state of *Callitriche autumnalis*. (J. B.).—1, *Tilia europæa*, or common Lime; 2, *Catalpa bignonioides aurea*; 3, *Populus alba foliis aureis*; 4, *Sambuca racemosa tenuifolia*; 5, *Ulmus campestris viminalis* variegata. (Ellen).—*Kerria japonica* fol. var. (J. T.).—1, *Crataegus pyracantha*; 2, *Rubus odoratus*; 3, *Lælia majalis*; 4, *Aster Lynosyris*.

**COMMUNICATIONS RECEIVED.**—J. T. West. (The cards were not placed in a position to see them when we reported.) John Downie, G. F. W. Oman, G. Lee, J. F., H. D., Webb and Sons, Cannell and Sons, Harkness and Co.; J. Lock, will let you know shortly; "K., Dublin," G. H. H., T. A. Weston, E. J. L., Hull Chemical Works, Limited, W. L., E. Regnald Wild, H. K., T. Challis, G. C., J. J., R. M., D. C., H. S., H. R. A., F. R., J. M., W. C., S. C., D. I., T. L., W. E. Close, E. C., F. W. C., J. R. S. C., W. M. W., J. R. Pearson and Sons, G. A., A. Treherne and Co., Limited, J. Brookes, Sander and Sons, E. Neal, S. Heckscher, Emigrants' Information Office. "T. J. R." fruit plants and Conifers next week; T. T. and Son, C. S., W. S., R. P. B.

**COMMUNICATIONS RECEIVED.**—M. T., D. S. T. and Sons, G. G., A. J., J. F., R. N., W. S., J. R., H. S. R., W. S., M. W., E. D. S., A. O'N. (with photos, for which we thank you), W. H. W. T., P. Murray Thomson, J. S. U., R. P. B., H. R. R., John Sanders, G. H. H., W. B. H., J. D., F. End., R. I., Pennell and Sons, H. Goodhead, G. B. and Co., T. A. W., J. Ryland, J. D. (when sending fruits or flowers, please enclose full name and address; these will not be published), O. T., J. O., G. A., A. J., T. R. Hayes, Toogood and Sons, D. C., J. W. W., H. T., Thos. W. Pender, J. P., X. Z. A., K., J. Pegler, Hull Chemical Works, Limited, G. A., W. C., W. L., S. A., Elder, Dempster, and Co., "Liverpool Journal of Commerce," "Tomato," W. S. (fruits safe), A. R. T., H. G. Cox, M. T.

## Covent Garden Market.—October 8th.

### Average Wholesale Prices.—Fruit.

|                          | s. d. | s. d.  |                          | s. d. | s. d.   |
|--------------------------|-------|--------|--------------------------|-------|---------|
| Apples, English, dessert |       |        | Lemons, Messina, case    | 12 0  | to 20 0 |
| ½-sieve ...              | 4 0   | to 6 0 | " Naples ...             | 25 0  | 0 0     |
| " culinary, bush.        | 3 0   | 5 0    | Melons, each ...         | 1 0   | 1 6     |
| Bananas ...              | 8 0   | 12 0   | Nectarines, doz. ...     | 3 0   | 6 0     |
| Damsons, ½-sieve ...     | 4 0   | 5 0    | Oranges, case ...        | 16 0  | 21 0    |
| Figs, green, doz. ...    | 2 0   | 4 0    | Peaches, doz. ...        | 3 0   | 6 0     |
| Filberts, lb. ...        | 0 3½  | 0 4    | Pears, Williams, ½-sieve | 4 0   | 6 0     |
| Grapes, Hamburgh, lb.    | 0 9   | 1 6    | " Hazels, ½-sieve ...    | 3 0   | 4 0     |
| " Muscat ...             | 1 0   | 3 0    | Pines, St. Michael's,    |       |         |
| " Alicante ...           | 0 9   | 1 6    | each ...                 | 2 6   | 5 0     |
| " Colman ...             | 0 9   | 1 6    | Plums, ½-sieve ...       | 3 0   | 4 0     |

### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                         | s. d. | s. d.   |                            | s. d. | s. d.   |
|-------------------------|-------|---------|----------------------------|-------|---------|
| Aralias, doz. ...       | 5 0   | to 12 0 | Ficus elastica, doz. ...   | 9 0   | to 12 0 |
| Araucaria, doz. ...     | 12 0  | 30 0    | Foliage plants, var, each  | 1 0   | 5 0     |
| Aspidistra, doz. ...    | 18 0  | 36 0    | Grevilleas, 48's, doz. ... | 5 0   | 0 0     |
| Chrysanthemums ...      | 6 0   | 12 0    | Lycopodiums, doz. ...      | 3 0   | 0 0     |
| Crotons, doz. ...       | 18 0  | 30 0    | Marguerite Daisy, doz.     | 4 0   | 6 0     |
| Cyperus alternifolius   |       |         | Myrtles, doz. ...          | 6 0   | 9 6     |
| doz. ...                | 4 0   | 5 0     | Palms, in var., doz. ...   | 15 0  | 30 0    |
| Dracæna, var., doz. ... | 12 0  | 30 0    | " specimens ...            | 21 0  | 63 0    |
| " viridis, doz. ...     | 9 0   | 18 0    | Pandanus Veitchi, 48's,    |       |         |
| Erica gracilis ...      | 8 0   | 9 0     | doz. ...                   | 24 0  | 30 0    |
| Ferns, var., doz. ...   | 4 0   | 18 0    | Shrubs, in pots ...        | 4 0   | 6 0     |
| " small, 100 ...        | 10 0  | 16 0    | Solanums ...               | 5 0   | 8 0     |

### Average Wholesale Prices.—Vegetables.

|                         | s. d. | s. d.  |                          | s. d. | s. d.  |
|-------------------------|-------|--------|--------------------------|-------|--------|
| Artichokes, green, doz. | 2 0   | to 3 0 | Lettuce, Cabbage, doz.   | 0 6   | to 0 0 |
| " Jerusalem, sieve      | 1 6   | 0 0    | " Cos, doz. ...          | 6 0   | 0 9    |
| Batavia, doz. ...       | 2 0   | 0 0    | Marrows, doz. ...        | 1 0   | 0 0    |
| Beans, Scarlet Runner,  |       |        | Mint, doz. bun. ...      | 4 0   | 0 0    |
| bushel ...              | 1 6   | 2 0    | Mushrooms, forced, lb.   | 0 8   | 0 0    |
| Beet, red, doz. ...     | 0 6   | 0 0    | Mustard & Cress, pint.   | 0 2   | 0 0    |
| Cabbages, tally ...     | 3 0   | 0 0    | Onions, bushel ...       | 3 0   | 4 0    |
| Carrots, new, bun. ...  | 0 2   | 0 0    | Parsley, doz. bnchs. ... | 2 0   | 0 0    |
| Cauliflowers, doz. ...  | 1 6   | 2 0    | Peas, blue, bushel ...   | 0 0   | 4 0    |
| Corn Salad, strike ...  | 1 0   | 1 3    | Potatoes, cwt. ...       | 3 0   | 5 0    |
| Cucumbers doz. ...      | 2 6   | 4 0    | Radishes, doz. ...       | 1 0   | 0 0    |
| Endive, doz. ...        | 1 6   | 0 0    | Spinach, bush. ...       | 2 0   | 0 0    |
| Herbs, bunch ...        | 0 2   | 0 0    | Tomatoes, English, lb.   | 0 4   | 0 0    |
| Horseradish, bunch ...  | 2 6   | 0 0    | " Jersey ...             | 0 0   | 0 3    |
| Leeks, bunch ...        | 0 1½  | 0 2    | Turnips, bnch. ...       | 0 2   | 0 3    |

### Average Wholesale Prices.—Cut Flowers

|                           | s. d. | s. d.  |                          | s. d. | s. d.   |
|---------------------------|-------|--------|--------------------------|-------|---------|
| Arums, doz. ...           | 3 0   | to 0 0 | Lily of Valley, 12 bnchs | 12 0  | to 18 0 |
| Asparagus, Fern, bnch.    | 1 0   | 2 0    | Maidenhair Fern, doz.    |       |         |
| Bouvardia, coloured,      |       |        | bnchs. ...               | 5 0   | 6 0     |
| doz. bunches ...          | 6 0   | 0 0    | Marguerites, white,      |       |         |
| Carnations, 12 blooms     | 0 0   | 1 0    | doz. bnchs. ...          | 2 0   | 0 0     |
| Cattleyas, doz. ...       | 0 0   | 12 0   | " yellow, doz. bnchs.    | 1 0   | 0 0     |
| Chrysanthemums, doz.      |       |        | Myrtle, English, per     |       |         |
| bun. ...                  | 3 0   | 4 0    | bunch ...                | 0 6   | 0 0     |
| " doz. blooms             | 1 0   | 1 6    | Odontoglossums ...       | 4 0   | 0 0     |
| Croton foliage, bun. ...  | 0 9   | 1 0    | Orange blossom, bunch    | 2 0   | 0 0     |
| Cycas leaves, each ...    | 0 9   | 1 6    | Roses, Niphetos, white,  |       |         |
| Cypripediums, doz. ...    | 2 0   | 3 0    | doz. ...                 | 1 0   | 2 0     |
| Eucharis, doz. ...        | 1 6   | 2 0    | " pink, doz. ...         | 2 0   | 0 0     |
| Gardenias, doz. ...       | 2 0   | 0 0    | " yellow, doz. (Perles)  | 1 0   | 1 6     |
| Geranium, scarlet, doz.   |       |        | " Generals ...           | 0 5   | 0 6     |
| bnchs. ...                | 4 0   | 0 0    | Smilax, bunch ...        | 2 6   | 0 0     |
| Ivy leaves, doz. bun. ... | 1 6   | 0 0    | Stephanotis, doz. pips   | 2 6   | 3 0     |
| Lilium Harris ...         | 2 0   | 2 6    | Stock, double, white,    |       |         |
| " lancifolium alb. ...    | 1 6   | 0 0    | doz. bun. ...            | 2 0   | 3 0     |
| " l. rubrum ...           | 1 0   | 0 0    | Tuberose, dozen ...      | 0 3   | 0 4     |
| " longiflorum ...         | 2 0   | 3 0    | Violets, doz. bun. ...   | 1 6   | 2 0     |



## An English Journalist on American Farming.

We do not know whether any of our readers ever have come across articles from the pen of John Foster Fraser. Lately he gave us a series of letters from Siberia; now in the interests of a leading provincial paper he is "doing" America, and doing it well, too. We believe Mr. Fraser hails from, or has passed many years of his life at, St. Oggs on the Floss. Readers of fiction will know what town and what river we indicate, and there at any rate he would, if he had eyes to see, observe in the neighbourhood some very typical English farming. Mr. Fraser has a great respect, nay admiration, for the American farmer, who really is not a pure American at all. Scotch or Scandinavian blood goes to make up the pedigree of the farmer, and he is a go-ahead fellow—hard working, and far-seeing, and a believer in the help of machinery to the last detail. It is wonderful what a feeling there is all the world over about the sons of stern Caledonia; they make headway where others starve, but a Scotch-American mixture can lick creation!

We do not quite grasp the vastness of American agriculture. We take the Eastern States; where, according to Mr. Fraser, agriculture is getting played out, and the farmers of the Middle States are gradually going further N.W., or crossing into Canada, and making a great settlement there. Montana, Nevada, and Idaho are receiving a great overflow. Just look in the map and see how far west these States are, and then consider for a moment how large the whole area of the States is—nearly the size of Europe. We lump it all under the words United States but forget how much those words cover.

The further west you travel, the larger the farm. The average size of the five million farms is 146 acres. The ideal size is 250 acres, and one of the mammoth farms of the west is 500,000 acres, of which 8,000 acres are sown with Wheat. Another farm with a Wheat field of 62 square miles! We



wonder how many self-binders will be turned into that "piece" at harvest time. We are often bothered by delay at the stations for railway waggons to convey our produce to the purchaser. It is simply a question of waiting a day or two. What should we say at having to burn our produce because the railway companies were unable to deal with it? Mr. Fraser has a great deal to say of James Wilson, who, from an Ayrshire herd laddie, has risen to the onerous and honourable position of Minister of Agriculture. Here again is the Scottish element. He, being a practical farmer, is the man in whom the farmers trust. We did not know that so far back as 1862 the American Agricultural Department was started, and how far ahead of us is Brother Jonathan. It makes us rather gasp when we read of the work undertaken and done by this Department. Evidently there is no grudging of funds: £100,000 per annum, and, besides that, most of the States have each their own colleges, which also receive each £5,000 per annum.

There is a college in Minnesota with between three and four thousand pupils, and each college has a vast tract of land for culture and experiment. There is nothing like starting free from prejudice. Mr. Fraser says the men of the Eastern States are not much for scientific farming; they have too much bias towards old ways and old customs. It is the new man, the western man, who is ready to listen, to read and to learn. Happily he has no end of opportunity.

Here is an example of some of the work done by the Department at Washington. Publications were issued, in number, 616, and of these publications, 8,000,000 copies were distributed. The "Year Book," which is a big volume, and one we have mentioned in this journal, is widely disseminated, as each senator and representative has 15,000 given to distribute among his constituents. Last year this office received and answered something like 300,000 letters which required information.

Unless the Englishman, says Mr. Fraser, is inclined to forget England and English ways, he will make no headway as a States farmer. He must come prepared to work hard and live hard, and to move quickly. Old slow methods won't do there. He requires the nervous unrest of the typical States farmer, a man who is only a labourer once or twice removed. A well educated Englishman of adaptive habits will beat the Yankee, for his education soon begins to tell.

The advantages of the N.W. and Canadian farming lie partly in the cheapness of the land (uncultivated land being obtainable for 1s. 8d. per acre, and cultivated for from £3 to £5 per acre), and also because, so far, there are no difficulties in connection with the squeezing by trusts and the railway companies. These amalgamations of buyers are a sore trouble to the small dealer, as they can dictate the price of grain for the season, and also control the railway companies, and they practically crush the small man out of existence.

Possibly some of our readers have seen pictures of the grain elevators in the great Wheat-growing districts. Talk about national granaries! Here we have the very thing, though really made for another purpose. Imagine a store that will hold 3,000,000 bushels of grain. The corn can be taken from the trains into these store-houses at the rate of 10,000 bushels an hour, and the big cranes can load the grain into vessels at the rate of 25,000 bushels per hour! Such is American contrivance.

To go back to Mr. Wilson. He has not at present the opening or closing of Argentine ports or Canadian live-stock on his brain, nor the milk and butter standard. He wants to do something for the schoolboy, the farmer of the future. He wants to start the lads at gardening, thinking truly that once he gets them interested in the cultivation of the soil, they will want a wider area than is afforded by a small garden. He will see that seeds and plants and trees are found. The experimental farms will come after, and we rather thank they have been pushed too much to the fore and the simple method ignored. There has been the effort to run before the pupil could walk.

There is a strong veterinary side in this Agricultural Department, and a strict watch is kept to try and ensure a clean bill of health, and only last year a Bureau of Plant Industry was created, and investigations started with respect to disease in cotton, fruit, timber, and in the evolving of new varieties which will be disease proof (at least for a time)—the brackets are ours. How often have we been assured that a new Potato has arisen which is perfectly disease proof? But, sooner or later, in spite of all asseverations to

the contrary, do we find it go the way of all Potatoes. And thus our savants will always find their work cut out; they may cross, and breed, and hybridise, but they will never reach absolute perfection. New complaints, and new pests seem to arise, the result, shall we say, of our over-civilisation?

The American farmer has one great pull over us: it is a point that touches us much at present. Under usual circumstances he can thresh his crops from the field. There is no intermediate process of stacking and thatching. This means much saving of time and labour. It is only during the most exceptional season we dare venture on such a process here. We think, too, we can grow a little more weight per acre, but we cannot boast much of betterness of price.

We wish Mr. Fraser would give us another article on American stock-raisers, we do not live by bread alone. He might leave out the pigs, but remarks on well known shire studs or shorthorn and Hereford herds, would be most welcome.

Mr. Fraser makes one statement that obliges us to stand still and stare. He says, "We had no Minister of Agriculture here until we had ceased to need one. England had then ended her career as an agricultural country." We had still a sort of feeling that we as a nation were to the forefront in agriculture, but it appears that our sun has already set. Where, we should like to know, will be found better farming than here? Where such pure-bred stock of all descriptions? Why! we are the pedigree stock breeders for the world; and Mr. Fraser admits himself, that our farmers are a very different class of men from their prototype in the States. We know, as corn raisers we are taking somewhat of a back seat, but the majority of people don't clearly see how this is. We still can grow more bushels per acre than any other country, and it is not our fault that the acreage is limited. We are girt in by our sea-walls, and ploughing the sea-shore has never been a profitable pursuit, even if it were feasible. We can still teach our Yankee friends a thing or two.

### Work on the Home Farm.

Another fine week has seen the harvest completed, and a capital finish it has been. The belated ones have been the most fortunate, and have a large portion of their Corn in fine threshing condition, whilst the "hurriers" have little that they can knock out for some time—a case of the hare and the tortoise.

Threshing is being very heavily prosecuted, and markets are glutted; 27s. is the top price for Wheat, and fair samples may be bought at 26s. There are plenty of Oats at 17s., and 29s. 6d. is so far the top price for Barley. Though prices are so disappointing, the yield still compensates by showing a bright lining to the cloud. One farmer has threshed 180qrs of Oats in one day and a half, and another 66qrs of Wheat in one day. Not bad, those!

Farmers seem more inclined to thresh than thatch, and where they are thatching the work is frequently done in a very inartistic manner; the pegs are put in with little care for regularity, and much more thatch than necessary appears to be the rule to be followed; but many of the stacks are so unsymmetrical that no thatching, even of the neatest, could make them look well. Some must have been put up by moonlight, as there is no other way of accounting for their peculiar shape. A farmer who can have six stacks in his yard all differing greatly both in form and size must have an intentional bias against uniformity. We do like to see some sense of proportion between height and width, and would never imitate either Mushrooms or mill chimneys.

It has been fine for dragging fallows, but too dry for ploughing lea. It is curious that after what has been considered a cold and wet season we have difficulty in ploughing for Wheat. The land is certainly surprisingly hard and dry. Very few Potatoes have yet been lifted, and they have gone direct to market. Farmers have no straw for Potato storing until they thresh. The fields show every appearance of having attained ripeness. We are retaining the services of our Irish labourers to do the necessary picking, and we must now go ahead. October is late for hay making, but we yesterday saw a fine second crop of Alsike and Rye Grass being mown down. The tenant of the field must be a bold man, but there certainly is a prospect that success may justify his temerity.

Black faced rams, especially Hampshire downs, are greatly in request, and those breeders who still require them are in a quandary, for the supply has altogether ceased as regards their own stock markets, and they are anxiously wiring to auctioneers at likely places, giving them almost unlimited commissions. The much to be desired improvement in English mutton will soon be an established fact; but why could not farmers be more ready to see what was coming.



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## Journal of Horticulture.

THURSDAY, OCTOBER 16, 1902.

### Commodities and Luxuries.

If anyone takes the trouble to dissect the various branches of horticulture, it will be seen that its make-up is composed very largely of what may be called commodities and luxuries. We may begin with those who pursue the gentle art; some do it for pleasure pure and simple, and others for profit and a means of livelihood. Our private gardener, for instance, is a luxury in the eyes of his employer. To supply the actual worldly needs of the latter he is not essential, and his business is to provide those extra comforts and luxuries which wealth can purchase. Yet I question whether gardeners are disposed to look at the matter in this light. As a class, they claim to be underpaid in comparison to other occupations not requiring the same knowledge and training, and perhaps rightly so. Again, they work under many disadvantages, and are frequently expected to make bricks without straw, like the Israelites of old, and their privileges are privileges rather than rights.

This is all true enough, and from the gardener's point of view it is not easy to understand; but it should not be forgotten that the man is a luxury. He plays but an unimportant part in the great concern of supply and demand or capital and labour, and if superfluous wealth were suddenly cut off, his occupation would be gone. The same may be said of other occupations, because if men generally were only possessed of sufficient wealth to provide for the actual needs of life, trade would at once be at a standstill; but the private gardener is attached to the person of his employer, and contributes to his personal luxuries, which could be dispensed with if circumstances demanded it, and the latter pays him as much as he can afford,

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.



rather than as much as he may be worth. In these circumstances the question of combination amongst private gardeners, which is sometimes talked about, is absurd. Gardeners cannot put a monetary value on their occupation, when that occupation does not contribute towards the income of their employers, so the situation must be accepted as it is. When everything is considered, the difference is readily seen. Take the case of a wealthy manufacturer or coal owner. The meanest workman in the mine or factory is a unit in the combination which provides the owner with his wealth, and as such he has to be considered; but the private gardener, though his position is infinitely better, is nothing of the kind. In fact, he is not a paying concern, and could be dispensed with before the miner or the factory hand.

All the same, and luxuries though they be, I do not think that private gardeners have as much room for complaint as some of them imagine. Comfort and peace of mind are two great factors towards happiness in this life, and it must be said that many employers, the majority of them I think, study their domestic employes in this respect. Perhaps the gardener who receives 30s. per week may think he is ill-paid by the side of the artisan who receives half as much again in hard cash, but the former should also consider his perquisites. Let him reckon house rent and other items, and the fact that trade disputes, slack times, and bad weather do not affect his pocket, and he will have to confess that he is the better off of the two, luxury though he be.

The very fact that he provides the luxuries rather than the actual commodities of life, removes a load of responsibility from the life of our private gardener, because disasters through unfavourable climatic conditions, and other losses do not necessarily affect him in a direct way. Last May, for instance, we had a severe frost which did great damage to fruit and vegetable crops. Everybody suffered, the private gardener and the market gardener; but they were not affected alike. The former, in the interests of his employer, and for his own satisfaction as well, deplored the loss, but it did not affect his salary; but how about his neighbour the market gardener? To him the loss was doubly serious, because it was a question of pounds, shilling, and pence. On the welfare of those crops depended the living of the man who is employed in the commodity aspects of horticulture, and the whole or partial loss meant a difference in the profit and loss account at the end of the year. To mention another instance of similar character; a terrible storm burst over a part of Kent a few weeks ago which respected neither the fruit in private gardens nor market plantations. They all suffered alike, but with a different effect; because whereas the private gardeners will have less fruit for the kitchen and dessert table, the deficiency can be supplied by their employers without seriously affecting them; the little market man, and the big one too for the matter of that, were depending on the fruit in the orchards and plantations to bring in so much money, but in the space of only a few minutes hopes and calculations were dashed ruthlessly to the ground.

The object for which a garden is cultivated governs the methods that are employed. In private gardens certain crops are grown in certain ways to fulfil the wishes of the owner of the same, and the gardener gets into a groove suitable to the circumstances. He is dealing with luxuries, mind you, and the question of profit and loss does not closely affect him. It is when he leaves this line and takes up commercial gardening that he realises the difference between supplying one family with its luxuries and the public at large with its commodities. Many instances could be given of men who have given up private gardening, and, through their natural business capacities, they have adapted themselves to the changed circumstances, and have made not only good livings, but in some cases fortunes. But the failures must also be considered. How many private gardeners have invested their little savings in commercial horticulture, only to find out that their former training was of little use to them in the new line, and that the methods which answered in one case were out of place in another, which had to show a profit? They might have learnt the right course by experience if the funds had held out, but with these expended they had no other choice but to go back to private service. It is just a question of cutting a peg square and then trying to fit it in a round hole. The principles of horticulture may be learnt in a private establishment, but if his gardening has to show a profit the student had better

get experience in an establishment where this is done before he sets up in business for himself.

And what has been done for horticulture through the mediums of its luxury and commodity aspects? Much. Through the lavish expenditure of wealth for the sake of a hobby, and to provide luxuries for those who can afford them, the natural products of the whole world have been gathered together in these islands, and the conditions provided so that they can be grown artificially. Art has been brought to bear to improve on Nature, in the introductions of fresh forms and new varieties of plants for the same end, and not really because they were essential for the daily requirements of the community at large. Luxury plays an important part in the higher phases of gardening. The nation would doubtless exist and prosper without gorgeous Orchids, costly exotics, and new varieties of scores of flowers, but without them it would be all the poorer.

With the growth and progress of a nation, its requirements also increase. What were counted as luxuries in one generation are commodities in the next, and in horticulture this is particularly well demonstrated. Not many years ago the only Grapes in the market were the surplus produce from private establishments, and they were luxuries if only on account of the prohibitive price. But men saw money in Grapes, and now they are practically reduced to a commodity. And in order to produce them at the commodity cost, growers had to unlearn a great deal that had formed their education, and adopt other tactics. According to established customs, Grape growing was an intricate operation, requiring great trouble and expenditure; but the market man has upset the theories of the old growers altogether. He has shown that the best of Grapes can be grown in simple houses, with small borders and ordinary treatment, and by his economic methods he produces crops year by year that would have been considered impossible by the old school of Grape growers. Whether it pays is his concern, but by means of competition and a large output the price of English Grapes has been brought down to the level of a commodity.

Nor is this a solitary instance. Look at Tomatoes, Cucumbers, plants, flowers, and vegetables at all seasons, that were luxuries in our grandfathers' days, but are commodities now, and purchased for daily use by the man in the street. Indeed, apart from the personal pleasure and satisfaction there is in growing your own produce, it is questionable whether the average garden pays, and if the expense were reckoned up it is possible that it would be cheaper to buy the produce.

This can only be explained by the fact that commercial and commodity gardening is also economic gardening. The best of everything has to be produced at the lowest possible cost, and in quantities that would be impossible in a private establishment. It is from the private garden, the luxurious adjunct to the home of the well-to-do, that these various branches have emanated, the nurseries, market-growing establishments, and the rest, and owing to the various means of growing horticultural produce of all kinds the line which divides garden luxuries from garden commodities gradually grows less and less distinct. Is there a possibility also of the private gardener pure and simple becoming extinct? Some perhaps will think of the many establishments which, though they do not keep a profit and loss account, keep a "surplus produce" item which is expected to grow rather than diminish, and shake their heads with a fear that such a thing is not unlikely.—G. H. H.

#### Small Fruit Culture.

So far back as the official figures are available, it would appear that the extent of land in Great Britain devoted to the cultivation of small fruit this year is, with one exception, the largest on record, as it now amounts to 75,378 acres, or 379 acres more than in 1901. The present acreage has been exceeded only by that of 1896, when the extent of land under small fruit was returned at 76,245 acres. Inasmuch, however, as there was a continuous expansion in the acreage up to 1896, followed by a pronounced contraction in 1897, and by another continuous expansion since 1898, it appears not improbable, observes the "Times," that through some imperfection in the returns the area of the crop was over-estimated in and before 1896, and that the correction made itself apparent in the returns for 1897 and 1898. It seems likely, therefore, that the present year's acreage, which is 5,625 acres in excess of that of four years ago, is really a maximum, although the figures do not show it. Kent claims nearly one-third of the entire acreage.



**Odontoglossum Wilckeanum var. Rothschildianum.**

Our illustration of this splendid variety shows its immense size—fully 4½ in across. The ground colour is creamy-white, shading to yellow at the tips of the sepals. There are several reddish-brown spots, while on the petals this colour appears in irregular spots and blotches. The lip has a broad, whitish apex, and this is prettily fringed. It received a First Class Certificate from the Orchid Committee when exhibited at Westminster on September 2, by Norman Cookson, Esq., (gardener, Mr. H. J. Chapman), Oakwood, Wylam-on-Tyne.

**Dendrobiums: Their Growth and Culture.**

(Continued from page 305.)

*D. Farmeri* is another very pretty evergreen species from Moulmein. In this the sepals and petals are yellow with a rosy suffusion, the lip deep yellow, while the racemes are looser than those of *D. densiflorum*. *D. fimbriatum* and its variety *oculatum* are tall-growing evergreen species, bearing loose yellow flowered racemes. They are natives of the Himalayas.

*D. Findlayanum* is a peculiarly habited species, the joints much swollen at the nodes and very slender below. The flowers are whitish or pale lilac in ground colour, the lip yellow with a whitish margin. No difficulty will be found with this pretty deciduous species, which is named after a Mr. James Findlay, who discovered it in Burmah in 1867. *D. formosum* is perhaps the best known of the nigro-hirsute group, and a very beautiful Orchid. The pure white flowers are large and very handsome, the yellow stain on the lip serving the better to show the purity of the other segments. This is one of the many fine Orchids the late Mr.

Gibson sent to his employer, the Duke of Devonshire, at Chatsworth, he having found it on the Khasia Hills. But it is a widely distributed species, and plants have been collected over a very wide area.

Another lovely species belonging to the black haired section is *D. infundibulum*. This, when in good condition, will grow 30 in in length, the upper foot or so being wreathed with the beautiful pure white flowers, with a dense yellow eye to each. Grow this in the cool end of the Cattleya house; in the warmest house it is sure to be attacked by thrips. Its variety, *D. Jamesianum*, has shorter, stouter, and more erect stems, the flowers being slightly different in form. A cool and very moist atmosphere, small pans, and abundant supplies of air and root moisture are necessary for these two fine plants. *D. lituiflorum* is worthy of a place, and makes a very pretty basket plant, its pendulous stems being in spring covered with the pretty pink and white flowers.

*D. Lowi* is an uncommon and handsome species belonging to the same set as *D. formosum*, and bearing light buff yellow flowers stained on the lip with red. It comes from Borneo, and was discovered and sent home by Mr. Hugh Low some forty years ago. *D. MacCarthiae* is a very beautiful species, but with a very unenviable reputation among growers. In colour it resembles a

good form of *D. nobile*, the flowers, however, seldom opening quite fully. Probably this species will never become really well established in collections, as it is questionable whether the plants are very long lived, even in their native habitat. Treat it as advised for the deciduous group.

*D. Macfarlanei* is a pure white flowering species, known also as *D. Johnsoniae*. It is a native of New Guinea and other parts of Australasia, and has of late been much more plentiful in collections owing to importations by Messrs. Sander and Co. and other firms. It should be included in any representative collection. *D. meschatum*, and its variety *calceolaria*, is a very strong and stout grower, throwing up immense stems over 6 ft in height, that in their second year produce loose racemes of yellow flowers with deep purple or maroon blotches on the lip. These, although making a grand show, only last a week or ten days, and owing to the bulk of the plant, it is unsuited to small collections.

The well-known *D. nobile* is perhaps the finest garden Orchid in existence. Its varieties are very numerous, and it thrives in an ordinary stove or warm greenhouse as well as in the Orchid house proper. It has been used with great success as a parent by hybridists, and is quite indispensable to every collection. Besides the type, the finest of all the varieties are *D. n. nobiliss*, *D. n. Schröderianum*, the beautiful *albino*, and *D. n. elegans*. By bringing the plants on in succession, its flowering season may be made to extend for six months or more, and it is easily propagated

either by division or by laying the stems on pans of moss.

*D. ochreatum* or *Cambridgeanum*, as it is also known, has stems 8 in or so in length, and it flowers upon these in a green state like *D. chrysanthum*. Its blossoms are a bright yellow with a deep stain on the lip. After flowering it should be rested in a cool house and repotted or top-dressed when it commences to grow in spring. It is a native of India, and first flowered in this country at Chatsworth in 1838.—H. R. R.

(To be concluded.)

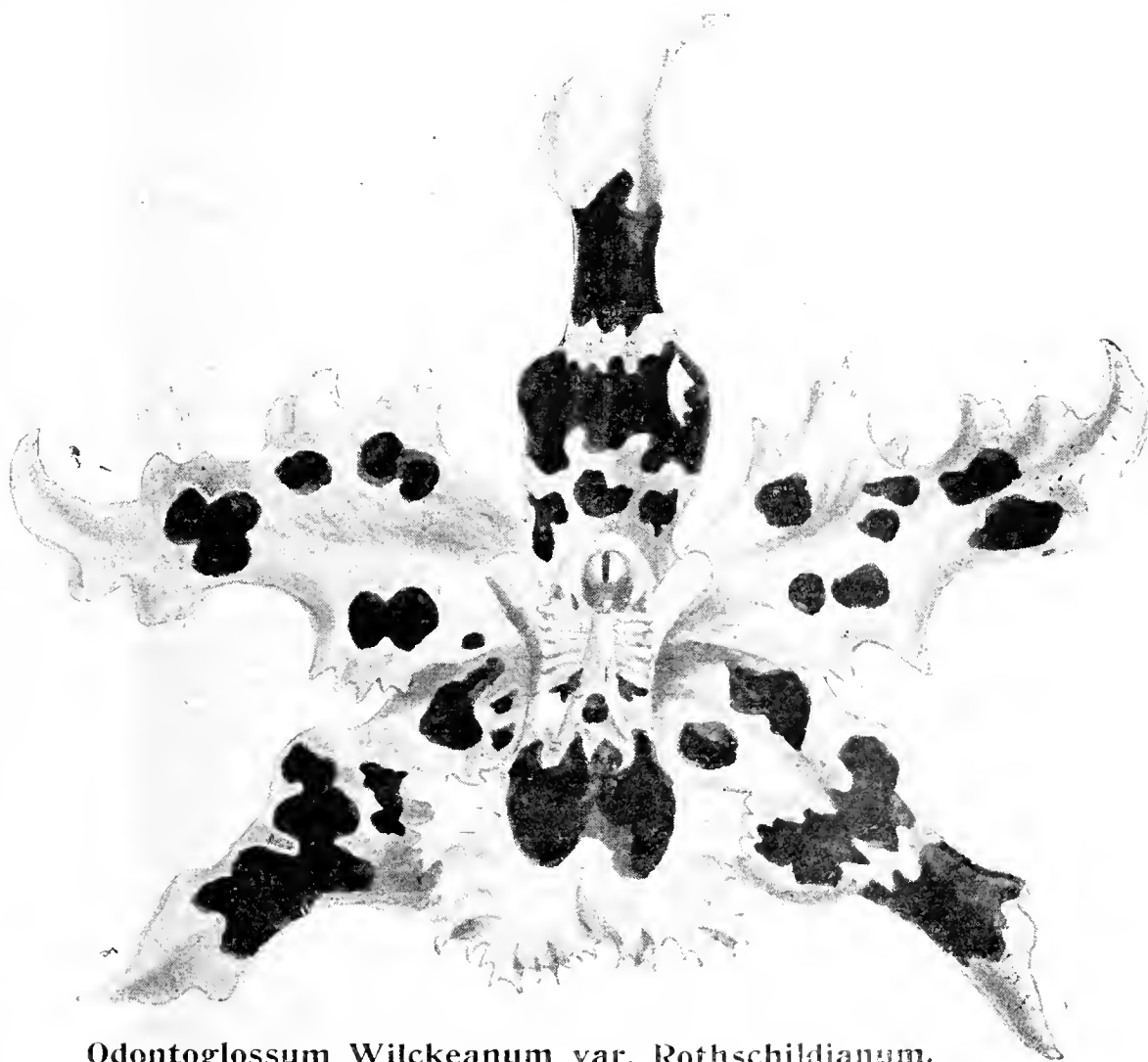
**The Week's Cultural Notes.**

In many small collections of Orchids, as well as in the large ones, there is a compartment devoted to flowering plants alone. This is a very good idea, as the blossoms last far longer than when the plants are kept to the growing quarters. Not always, perhaps, are there Orchids enough in

flower to furnish it properly, and other plants of an ornamental character have to be brought in. Flowering plants other than Orchids are not usually to be recommended, those having ornamental foliage being most suitable, as nothing in the whole race of flowering plants looks really well in conjunction with Orchids.

Small, well-coloured pieces of *Croton*, *Caladium*, *Coleus*, *Dracena*, *Fittonia*, *Panicum*, and *Tradescantia* help materially in brightening up a group of Orchids, and with the aid of these and some Ferns of various sizes, a few flowering specimens may be made to go a long way. *Anthurium Scherzerianum* may be admitted, as this serves to make a contrast with the usually rather sombre tints of the Orchid, and it is very lasting. Small Palms at intervals, and larger specimens to flank and back up the group are excellent, and the whole arrangement must be kept as light as possible, not arranged in a flat sloping bank, but with distinct specimens standing out here and there, the kinds varying, of course, with the season.

Just now the deciduous *Calanthes* are rapidly approaching the flowering stage; as long as the leaves are healthy and the roots correspondingly active, continue to allow the usual water supply, but as these die off, very little moisture will be needed, and as soon as the flowers are well open the water supply may as well be



**Odontoglossum Wilckeanum var. Rothschildianum.**



discontinued entirely, as the roots are usually dead by this time. This refers, of course, to *C. vestita* and *C. Veitchi* and their hybrids and varieties, not to such as *C. Turneri* and *C. oculata gigantea*.

*Thunias* should by now be entirely at rest, and may, if room is scarce, be shaken clear of the compost, labelled, and hung up in small bundles in a warm house. Although this treatment may seem rather rough, it is much more to the taste of the plants than being shifted about from pillar to post in cool draughty houses. The stems themselves contain all the stored-up energy; the roots are dead, having finished their work, and a new set will be evolved next season.—H. R. R.

## Mostly Irish.

"Season of the sere and yellow leaf." What a powerfully poor description of autumnal glory! Surely that writer was colour blind to an *embarras des riches* the grand old artist flings off the palette in bold smudges, from pale chrome to intense crimson. Yet fair, but fickle, mistress, all thy inimitable blarney cannot atone for a season's misdeeds and shortcomings. From such time as "rough winds shook the darling buds of May" low mutterings arose till now, at Corn reaping and fruit gathering, including the noble tuber, they have swelled into growls both loud and deep. Still we escaped that hailstorm of which our papers told us as occurring in Kent, leaving hail on somebody's lawn a foot deep. We wondered what sort of a foot the measurement was taken with; whether it was a lady's number three shoe or a good, honest, perpendicular twelve inches. Verily, hail a foot thick is hard to gulp down. Are there, ahem!—are there any lineal descendants of Ananias over there in the reporting line? Anyway, we cannot compete with that in Ireland, although cold nights and stormy days prevailed till mid-September.

One of the Gunnersbury boys called in—all smiles. "A fortnight's holiday." "How's all at home?" (That charming home at Straffan, in Kildare.) "Oh! six degrees of frost this morning" (September 13). Condolences, of course. "Yes, but everything was blackened previously, and all starting into growth again." More condolences, cheapened by the fact that, as yet, frost of no degree has reached the seaboard of Dublin. We do not dispute the Straffan record, for there everything, even the commonest thermometer, must be, like Cæsar's wife, above suspicion. Experience, too, has proved the Kildare climate to be a trying one; moreover, we know the Straffan recorder of old, having been there more than once when there was "nothing to see," and found ample to make one say, "Oh! Straffan in Kildare with all they faults I love thee still." If there is one thing more than another that Straffan is famous for, and it is just a question whether there is, then that one thing is Daffodils, and though miles away, and months out of season, the bulb number of "Our Journal" brings the last view of them back in a flash. There they are—here, there, and everywhere; all over the place; beds borders, and lawns. Such blooms! Such foliage! Such patches of seedlings springing up in the damp, mossy grass! That although Rush produces such Tulips as cannot be excelled, if equalled, and that is doubtful, in the British Isles, or anywhere else, the Straffan Daffodils seem to beat the Rushians by points.

Never did the Botanic Gardens of Old Trinity (Trinity College, Dublin) look fresher and brighter than when seen in the evening of an August day. Plenty of rain suits this side of Dublin city. As a special favour the Water Lilies were wide awake, hadn't closed an eye, and one hardly knew which to admire most. The rich, bright red *N. Ellisiana*, however, is probably the most striking, but huge golden eyed *Chromatellas*, laying over sideways to display their charms were very captivating. *Yucca gloriosa plicata* bore dense spikes of copper tinted buds opening out into solid, waxy-looking blooms; and nice were the large flowers of *Lilium Browni* with purple banded backs. It is the home of curios in plant life, amongst which *Helleborus lividus*, sent or brought to Mr. Burbidge by a lady from Majorca, was pointed out; also *Haloagis alatus*, first cousin to a Gunnera; *Coronilla securigera*, the Hatchet Plant with yellow blooms which goes to sleep; *Hyoscyamus perennis*, the Perennial Henbane, very pretty and very singular;

*Hypoxis hemerocalloides*, a woolly budded South African with yellow blooms, *Crinum*-like foliage, and twisted, triangular stems; and a host of things which would be passed over by the man in the street failing those patient and interesting explanations the kind host is ever ready to give. Thicker and thicker do the plants stand in the houses; houses made elegant and attractive by nearly every creeping and climbing thing that grows. In spite of asking, one does not quite know how Mr. Bentley, the foreman of this department, smart as he is, manages to keep all in such order; but, as the Gunnersbury boy said, there are not many chaps like Bentley.

A very interesting marriage in the gardening world came off on the rocky coast near Dalkey. The wedding was quiet, but not the less worth noting. Taking place without witnesses, which was very irregular, of course, nothing probably would have been heard of it had not Mr. Burbidge in his rock rambling have discovered the contracting parties and their progeny. Some dozen of the children he ran down in the grounds of Sir Francis Brady; killed 'em by drying, and the mummified remains are now decently interred (?) in his *Hortus Siccus*. It appears, on evidence, that years ago *Cineraria maritima* escaped from the confinement of some garden and made herself (or himself) quite at home on the Dalkey rocks, fell in love with Mr. (or Miss) Ragweed, *Senecio Jacobea*, and so faithful have they been in wedlock that their offspring have arisen here, there, and everywhere in the locality. The resemblance to both father and mother is too striking to admit doubts as to their parentage.

After twenty years friend Hardy, of Dunardagh, is "knocked about." Death has taken the master, George Orr Wilson, Esq., and the auctioneer's hammer has dispersed the plants it has been his (Mr. Hardy's) labour of love to collect and grow. All credit to him that he should work as energetically to the last as he did from the first, for there are few plant auctions so well arranged and prepared for as was the Dunardagh sale. Taken all round, he is probably satisfied with the prices realised, although when he and the auctioneer mounted the rostrum—stage—in the Palm house he growled and looked real wicked as a superb specimen *Areca* was knocked down at less value than the teak tub containing it. So does a good man take the keenest interest in his care to the last. May the fates be propitious in resettling him as well as he deserves.

The People's Gardens in the Phoenix Park never looked, folk say, better or brighter than they have this season. That praise is emphatically endorsed, and can also be accorded to Mr. Kearney's work in Stephen's Green. One massive bed in the People's Gardens, composed of the silvery *Centaurea* with a fine dark *Heliotrope* interspersed, is particularly striking, and some huge clumps of *Tritomas*, standing out boldly against a background of evergreens, are simply grand. In our own somewhat limited field of labour a couple of sunny days have brightened up things considerably, and brought out a host of cheery blossoms to liven us up. Perennial Sunflowers, Cactus Dahlias, Golden Rod, Michaelmas Daisies, scarlet *Lobelia*, the last Rose of summer finely represented by Ulrich Brunner, La France, and red and white *Rugosas*, with "lashins" of Sweet Peas contribute the lion's share; whilst the Italian garden is at its best. In a warm corner *Eucomis punctata*, the Pine-apple Lily, has just thrown up a strong spike of sober looking blossoms from its crown of broad, handsome foliage. So much for the lighter side of gardening life in Ireland; there are, of course, more grievances one could give, but they need not detain, being, as they are, mostly Irish.—K., Dublin.

### A Famous Chilian Pine.

All those who have visited Dropmore Park, near Cliveden, Bucks, will hear with regret of the decay and death of the magnificent Chilian Pine, said to be the finest specimen in Europe, and which was presented to Lady Louisa Fortescue by George IV. in 1830, other trees of a similar kind being planted at the same time in Kew Gardens. The growth of the one at Dropmore proved wonderfully symmetrical, the branches, from the ground upward, being in every way perfect. Signs of decay in this famous "Monkey Puzzle" were observed at the beginning of the present year, and everything possible was done to save it, but without success. It is now quite lifeless. The roots are supposed to have been attacked by some malady the nature of which has not yet been determined.

## A Biography of Dr. Lindley.

John Lindley was born February 5, 1799, at Catton, near Norwich, which may now be styled the City of Botanists, for there were born three of England's greatest botanists—Sir James Edward Smith, Sir William Jackson Hooker, and Dr. John Lindley. His father was a nurseryman, but being unsuccessful in business, he subsequently undertook the direction of the Bristol Nurseries of Miller and Sweet, at that time one of the most extensive and prosperous establishments in the kingdom. He was the author of a very useful work, which was edited by his son, entitled "A Guide to the Orchard and Kitchen Garden," but it appeared at a time when the present taste for garden literature was as yet undeveloped, and when what is now called gardening was confined more to the establishments of the higher classes, who were themselves not gardeners, and consequently that excellent work never met with the encouragement it merited, and never reached a second edition. Trained as young Lindley necessarily was among plants and flowers, and being surrounded by so many botanical associations and associates, it is not to be wondered at that an intellect like his should soar above and beyond the ordinary ideas of a nurseryman, and see something in the objects with which he was surrounded of greater interest than that which was connected with their commercial value. We find, therefore, that instead of being a nurseryman he was bent on becoming a botanist, for so early as 1819 he published a translation of Richard's "Analyse des Fruits;" and in his twenty-first year he produced his "Rosarum Monographia," the preparation of which must have occupied him a long time previously, for the excellent plates are all from his own drawings, and the study of the subject must necessarily have engaged his attention at a period when he was yet a mere youth.

In the following year Mr. Lindley published "Digitalium Monographia," and about this time he became garden clerk at the Chiswick Garden of the (Royal) Horticultural Society, which had then been newly formed; and in this capacity he remained till the retirement of Mr. Sabine in 1830, when Mr. Bentham was chosen secretary and Mr. Lindley was appointed the assistant secretary. In this capacity he remained till his retirement in 1858; and, as a recognition of his long services to the Society he was chosen secretary—an honorary appointment he retained till 1863. About the time he became connected with the Horticultural Society, he was engaged by Mr. Loudon in the compilation of the "Encyclopædia of Plants," which occupied him for a period of seven years, and which was completed in 1829.

During the time he acted as assistant secretary to the (Royal) Horticultural Society, he held several other appointments. In 1826 he succeeded Mr. Bellenden Ker as editor of the "Botanical Register," established by Sydenham Edwards in 1815; and the botanical attainments he exhibited in the management of this and the execution of his other works recommended him to the botanical chair of University College, London, where, in the end of April, 1829, he delivered his introductory lecture as Professor

of Botany in that institution. This appointment he held for twenty-nine years; and it has been remarked by one of his old pupils, "I can truly say, as a lecturer he was one of the best teachers I ever heard. Free and conversational in his manner, his matter was excellent and methodically arranged. I entered his class with little knowledge of, and less liking for, botany, and left it, having taken his gold medal at University College, having amongst my competitors Dr. W. B. Carpenter, Dr. Lankester, Dr. Jenner, &c., and I maintained the superiority of his teaching by taking the silver botanical medal of the Apothecaries' Company open to the competition of all the students in England."

In his introductory lecture he announced his intention of teaching the natural system of botany, at that time unpopular among those who had been educated in the Linnæan school: to this he rigidly adhered. We question, however, whether so much of the credit usually attributed to Dr. Lindley as the fosterer of the natural system in this country is not unduly rendered. He encouraged the study of it in preference to that

of the Linnæan, and in all his works on the subject he adhered to that system. Still it cannot be forgotten that, not content with the natural systems which Jussieu and De Candolle originated, he was always propounding some theory of his own, which was never fixed, but which at uncertain intervals was doomed to be supplanted by another idea that seemed to find greater favour in the mind of the author. Students who were willing to adopt the natural system were thus, by Dr. Lindley's teaching, kept in a state of constant uncertainty. In his "Synopsis of the British Flora," published in 1829, he there adopts the arrangement of De Candolle, a system which has received universal acceptance from every botanist in this country and America; but in 1830 appeared his first elementary work on the natural system, entitled "An Introduction to the Natural System of



1799—DR. LINDLEY AT 50—1865.

Botany." Instead of following the systems of Jussieu and De Candolle, he adopted that of the latter, ignoring the apetalous classes of both, and throwing them in with the polypetalous class. This, as a consequence destroyed any ideas of sequence, or even of arrangement, that may have been formed by the student who had just mastered either of the other systems, and confused those of others who were but on the threshold of the science.

In 1833 Dr. Lindley published his "Nixus Plantarum," in which he restored the apetalous group, which three years previously he abolished, and ignored altogether the hypogynous and perigynous structures, which form such distinct characters in the other systems; retaining only the epigynous, which he made to represent a subordinate section, and adopting the character of the albumen for the primary divisions. In this case the affinities and sequence of the orders were again entirely disturbed. Three years later appeared the second edition of "A Natural System of Botany," in which the arrangement set forth in the "Nixus" was generally adhered to, but differed in some of the details, and this form he introduced in the subject "Botany," published by the Society for the Diffusion of Useful Knowledge in 1838, and which was intended as a book of instruction for the masses; but there is not even a reference in it to the system of De Candolle, which at the time was being taught by Hooker in Glasgow,



Graham in Edinburgh, and Henslow in Cambridge, and which is that now generally accepted and taught in every institution of the country.

In 1845 appeared "The Vegetable Kingdom," with a wholly new arrangement, differing entirely from all the others he had previously been labouring to introduce. In this he restored the great hypogynous, perigynous, epigynous, and deelinous divisions of Jussieu, and suppresses the apetalous, which he distributes among the other divisions. This is, undoubtedly, by far the best scheme he has ever proposed, and had he introduced such a system in 1833, instead of that set forth in the "Nixus," he might have lived to see it adopted in botanical education as a formidable rival to that of De Candolle. But this last and certainly his best effort, was the result of a gradual building up of material prepared by others. It was first of all a recurrence to the Jussieuan and Candollean systems, with the adoption of such views as had previously been enunciated by Bartling, Endlicher, Martius, Brongniart, and others, aided by the labours of our own countrymen, the Hookers, Bentham, Griffith, Gardner, Miers, Wright, and more, but it came too late for adoption.

It is not, however, with the view of drawing attention to what may be supposed Dr. Lindley's uncertain ideas with regard to classification that we have directed attention to these matters, but rather to show that an opinion we have often heard expressed, to the effect that it is to him we are indebted in this country for the adoption of the natural system as it is now taught, is not a correct one; and that if students in botany had relied for guidance on the works of Dr. Lindley alone, they must have experienced that feeling of insecurity that one has when in a strange country he places himself under a guide who hesitates at every deviation of the beaten track.

In 1832, Mr. Lindley received from the University of Munich the honorary degree of "Doctor of Philosophy," and henceforth was known as Dr. Lindley. In 1834 he published "Ladies' Botany," a work in two volumes, and written in a familiar and popular style in the form of letters; but whether the style of the letters did not suit their taste, or the subject their capacity, or whether it was that what is suitable for gentlemen is not equally so for ladies, the work proved a failure, and has long since fallen into obscurity.

He was a voluminous writer, and besides those of his works to which we have already referred, and numerous others of smaller character, he was the author of an "Introduction to Botany," which passed through four editions; "The Genera and Species of Orchidaceous Plants;" "Sertum Orchidaceum;" "School Botany;" "Elements of Botany," &c.; and, in conjunction with Mr. Hutton, "The Fossil Flora of Great Britain." His greatest and best works are "The Vegetable Kingdom," already referred to, and "The Theory of Horticulture," the first edition of which appeared in 1840, and the second under the title of "The Theory and Practice of Horticulture," in 1855. In 1841 he united in establishing the "Gardeners' Chronicle," of which he remained the editor till the summer of 1865, when he was succeeded in that office by Dr. M. T. Masters.

Dr. Lindley was a Fellow of the Royal and Linnæan Societies, and a member of most of the learned societies of Europe. He was awarded the gold medal of the Royal Society, and in 1863 his friends presented him with a piece of plate in the form of a candelabrum as a testimony of their regard.

Dr. Lindley was not what might be termed a great botanist. He raised himself to a degree of eminence, not so much as a botanist as a journalist, and by his connection with the (Royal) Horticultural Society. With the exception of his works on the Orchidaceæ, and the "Vegetable Kingdom," he did not contribute much to the store of botanical knowledge; and when we compare what he did for the extension and encouragement of the science with the labours of Sir William Hooker, or his contributions to it with those of Dr. Bentham and Dr. Hooker, we are not inclined to concede to him so high a position in the rank of botanists. What he might have attained if he had devoted that time to botany which he gave to journalism, can, of course, only be left to conjecture.

He was a man of an extraordinary energy and activity of mind frequently amounting to impetuosity; yet he had not the philosophic mind of Darwin, or Mohl, or De Candolle, and many others. His name does not rank with those of Ray or Robert Brown. But although he came short of all those qualities he had great powers of generalisation and adaptation, and he could so combine and apply the views of others as to render them practical and popular, as has been so well exemplified in "The Theory and Practice of Horticulture" and "The Vegetable Kingdom."

It was, therefore, rather as a teacher that he achieved his greatest success. His classes at one time were well attended; and it spoke much in his favour that his students frequently numbered as many as two hundred, the greater number of whom were purely voluntary, and not compelled by any college curriculum to attend on the course. Still, as a teacher he never attained the position of Sir William Hooker, Professor Henslow, or Edward Forbes, and he will be remembered more as a man of action than of deep scientific thought.

## Crocus speciosus, M. Bieb.

It is surprising that the worth of the autumn-flowering Crocus is as yet hardly recognised, and that so few gardens possess even one species of this lovely and valuable flower. The Colchicum, a less attractive flower, is better represented, and, unfortunately, the name of "autumn Crocus" has been so commonly applied to it that when one mentions the "autumn Crocus" most people assume that it is the Meadow Saffron to which one refers. I should be one of the last to depreciate the value of the Colchicum, which has a place of its own in the garden and ought to be indispensable, but the true Crocus is so delightful in autumn that it ought to be cultivated as well. To tell of the numerous species which bloom in autumn or early winter would take up a considerable space, so that I purpose only mentioning now one of the best, if not the best, of these autumnal Croci, *C. speciosus*, the "showy" or "blue" autumn Crocus. It is one of the finest of all Crocuses, and one only longs for its greater appreciation, an appreciation which might even lead to its improvement. *C. speciosus* is pretty widely distributed in its range of habitat, occurring, as Mr. George Maw tells us, from North Persia, through the eastern parts of Asia Minor, the Caucasus, and the Crimea, to the province of Podolia, in southern Russia. Maw doubts the record of its occurrence in Transylvania, but since his monograph appeared its known habitats have been extended by the discovery in Afghanistan of the fine variety, *C. s. Aitchisoni*, which has rapidly become popular. He classes it with the nudiflori, or species without a basal spathe, and with the annulati, i.e., the species with a basal corm tunic composed of coriaceous annuli.

A noteworthy point about this species is that it is one of the few Crocuses which produces its bud growths as bulblets or cormlets round the base of the old corm, where they remain without producing foliage for the first year. Another is that it has the longest petals or segments of any of the species known to Mr. Maw, who gives the comparison with *C. parviflorus*, as between half an inch in the latter and an inch and a half for *C. speciosus*. There can be no question regarding the beauty of this fine Crocus, which flowers in September and October in ordinary seasons (this year I had no blooms until the beginning of October), and no one can fail to appreciate its large blossoms of pale lilac or blue, so beautifully marked with deeper blue or, rather, purple feathering all over the flower. A mass of this Crocus presents a charming spectacle when the autumnal sun causes the blooms to open widely to its rays. When quickly grown, they are most pleasing, as they then present an unbroken mass of colouring, the leaves not appearing until after the flowers have vanished. The leaves are at times as much as 15 in in length at maturity, so that those who plant this fine Crocus will require to take their habit into consideration.

The variety *Aitchisoni*, from Afghanistan is a fine one, though I think that its lighter colour is rather a defect. On the other hand, it is a little later, a recommendation to some, and it is also larger, and it seems to me to open out more flatly to the sun. It is as prolific as the type, and soon increases rapidly. Any one who admires the noble Crocus *speciosus* would like to have a little further variety. This is not easily secured, as it appears to be a species which varies little in its native habitats, there being no well-marked varieties except *C. s. Aitchisoni*, so far as I am aware. In consequence, our best chance of obtaining some variety would appear to be by means of raising seedlings. Unfortunately, it is a species which seeds badly with me, the frequency with which we have wet autumns preventing its fertilisation and formation of its seeds. I have only saved seeds some twice out of fifteen or sixteen years, but from some purchased seeds I have one variety with much larger blooms than ordinary. I hope that this will thrive with me. May I ask those who cultivate this fine Crocus to endeavour to raise seedlings? With regard to the cultivation of *C. speciosus* one need say little. It can be grown as easily as any common spring Crocus, and is a charming occupant of the border, rock-garden, or of the lawn or wilder grass plot or meadow. It is an exquisite species, well worth growing by all who are admirers of the hardy bulbous or cormous flowers.—S. ARNOTT.

### Another Yellow Calla.

This interesting new plant was recently awarded a medal by the Massachusetts Horticultural Society, U.S.A., the raiser being Jos. Tailby, Wellesley, Mass. The plant is the result of a cross between *Richardia* (*Calla*) *Elliotiana* and *R. albomaculata*. Out of the batch of resultant seedlings one plant showed special merit, and was increased both by offsets and by seedlings, and it has been proved that the type is well fixed, for the variety comes true from seed. The colour is of a beautiful primrose yellow, with flowers equal in size to those of *R. Elliotiana* borne on stout stems, the leaves being beautifully spotted with white.



### Some Pillar Roses.

There are several things that already remind us of the approaching autumn and winter. The days are already much shorter, the leaves are beginning to fall, and the ingathering of the fruits of the earth are amongst these reminders. The interest of many will soon be centred on preparing for and planting of Roses. There are now so many sections of Roses that may be used in so many different ways that it is not always an easy matter, especially for a beginner, to decide what will be the most satisfactory to plant.

In these notes, however, we only intend to deal with that section of Roses that are very popular, and deservedly so, at the present time, pillar Roses. The place of honour must be given to *Crimson Rambler* (1893), even if it is sometimes decried. There is no Rose of recent introduction that has had such a distribution, or become so popular as this. Not only do we find it in the gardens of the rich, but also in cottage gardens, where it is much prized. It is a most accommodating Rose, as it may be used in so many different ways with equally good effect; but for arches and pillars it is an ideal Rose. When properly pruned, its large clusters of flowers are produced all round the pillars, from near the ground line to the top. The flowering period will extend over several weeks; indeed, a few may be found quite late into the autumn. To obtain the best results, however, it must have good treatment.

*Alister Stella Gray* is not such a strong grower as the above, but it makes a beautiful pillar Rose. The flowers are produced in large clusters—pale yellow with orange centre, almost white when fully expanded. It is a very chaste Rose, and should be included where pillar Roses are prized. For autumn blooming it is one of the best, and has been particularly good this autumn.

In *Aimée Vibert* we have one of our oldest *Noisette* Roses. Although it is often used for arches and pillars, it does not lend itself so readily as do many others, being, perhaps, more suitable for rambling over a bank, or pegging down and forming a large bush. *Gloire de Dijon* is too well known to need any description. No doubt this is the most familiar of all Roses, its hardiness and free flowering character making it suitable for all to grow. Grown more on walls than any other Rose, perhaps, but it also makes a good pillar specimen.

*Reine Marie Henriette*, often called a Red *Gloire*, is not so well known. It is a free grower, and gives some beautiful blooms. They are globular, rather loose, and sweetly scented. If it flowered as freely as the White *Gloire*, its usefulness would be greatly enhanced. I find it very subject to attacks of mildew. Another good red pillar Rose is to be found in *Reine Olga de Wurtemberg*. A very strong grower, with large leaves and semi-double flowers, but it does not appear to be a very free bloomer. The *Waltham Climbers* are excellent, and these I will have something to say about in your next issue.—J. S. U.

### Roses at Coventry.

When on a visit (early in September) to the "City of Spires," an opportunity was afforded to make a visit to the rosarium of Messrs. Perkins and Sons. This firm has a newly acquired site, situate about a mile and a half from the home establishment, in close proximity to the railway station. To the florist especially the names of Perkins and Coventry are synonymous, as the mention of one is a reminder of the other. A pleasant drive through devious lanes landed us at the venue in question, amidst purely pastoral scenery.

The Rose nursery consists of about twelve acres of old grass land, fully exposed, with a gentle trend towards the north-west, and as yet is devoid of sheltering hedges to protect the Roses from the fierce winterly winds. Such necessary screens, however, are in contemplation to be formed, principally of Beech. No material harm has been experienced. The staple soil is admirably adapted for Rose culture, as evidenced by the wonderfully vigorous growth of every plant, whether Hybrid Perpetual, Tea, or Hybrid Tea. The soil is composed of a strong, unctuous, reddish loam, of about 3ft in depth, superimposing a deep stratum of clay, rendered friable by exposure to frost. My guide, the elder member of the firm, and an ardent rosarian, I found actively engaged in superintending that all-important employment, "budding," prior to departing for a well-earned holiday.

The principal stock used for dwarf-trained Roses is the seedling Briar, also Briars from cuttings, and comparatively little difference was perceptible in their strength, or of the quality of the Roses grown upon them. The *Manetti* stock is

also largely employed, likewise the *Griffere*, of which Mr. Perkins has a high estimation for certain varieties of Roses, rendering them almost mildew proof. To the uninitiated, the process of budding on the dwarf stocks in question is interesting and puzzling, the bud being inserted close to the ground, below the tangled masses of Briar shoots of two seasons' growth. The great desiderata is to keep newly inserted buds from making growth before the spring season, when the masses of Briar shoots are entirely cut away, so that the dormant buds of the Roses derive the whole benefit of sap from the rootstock. The autumn Roses were indeed a glorious sight. The Hybrid Teas especially presented a grand feature, whilst also several of the Hybrid Perpetuals were remarkable for fine form and intensity of colour.

Standard Roses are largely grown. It should have been mentioned regarding the *Griffere* stock that Mr. Perkins considers it to be eminently suitable for strong climbing Roses. The new hybrid *Wichuriana* Roses were noted doing remarkably well, and two high stumps of old Oak trees in the centre of the garden were being furnished with young plants of them. These are essentially creeping or trailing Roses. To enumerate even the cream of the varieties would almost be an invidious task, and it is needless to say that the newest varieties were in evidence. Mention may be made of such as *Horace Vernet*, of a fine velvety purple red, shaded with dark crimson, large, full and of fine form; also *Captain Hayward*, *Paul Neyron*, *Merveille de Lyon*, and *Exposition de Brie*, a fine autumn bloomer, whilst *Caroline Testout* is one of the finest autumn Roses in existence. The two old nurseries contain Dahlias, Phloxes, Gladioli, and a host of herbaceous perennials.—G.

### Ordering Roses.

Roses should be ordered as soon as possible after the Rose catalogues are issued in October, since this will ensure the arrival of the plants as early in November as they can with safety be removed from the nurseries, and the probability of obtaining the best plants, because these are usually sold first.

## Gadding and Gathering.

"HERE AWA', THERE AWA'."

### New Cactus Dahlias.

A considerable number of novelties amongst Cactus Dahlias were certificated at the meetings that have been held in London during the season which is now practically closed. Those mentioned beneath are all new, though all have not received certificates. That fact, however, is not always a guide to the real merits of a flower for the garden, and some of the non-certificated flowers are better lasting, and have charms which are quite sufficient to entitle them to special notice. It is presumed that the undermentioned will be in commerce during and after next spring.

**H. J. JONES.**—A handsome flower, with deep primrose centre, the petals surrounding the middle being flat, but those at the base of the blooms are beautifully fluted and very lengthy, radiating attractively. It is one of the most effective new varieties of the past season.

**RINGDOVE.**—Though this variety was not certificated, it is yet one of the prettiest novelties seen at the London shows. The petals are rather too broad, reminding one of the older type of Cactus Dahlia, and the colour may not suit everyone. It is orange-red, with the tips of the petals a light, faded, silvery-lilac—a novel colour.

**PRINCE OF ORANGE** is one of the best among newcomers. The flower is of the popular incurved form, with finely fluted and narrow petals. The centre is of a deep glowing golden shade, passing off to a salmon red tint towards the basal half of the flower.

**F. A. WELLESLEY** is undoubtedly one of the best half-dozen of last season's novelties. The large blooms are well held up on dark-skinned wiry stems. The incurving, fluted florets are deep, bright cherry-red or crimson, and there is plenty of material in each flower, yet it is not clumsy. It is one to be especially noted.

**MRS. T. CHERRY** has a capital, bud-like, and firm centre, but is of very moderate size. The colour is bright lilac-red. It is distinctive, though not very effective for garden decoration. In vases and bowls the colour would be novel.

**REDCAP** is a splendid little flower, quite a gem for decorative uses. The blossoms are small, but "smartly" built, with firm florets, nicely fluted and incurving at the tips. It is a pretty, rounded flower, coloured bright crimson, with a dash of scarlet.

**VESTIVUS.**—From what was seen of this variety of Fancy Cactus Dahlia at the recent exhibitions, it seems to be a flower to last well. It has a splendid conical centre, and the petals incurve. They are somewhat broadened at the base. The ground-colour is deep yellow with a shade of bronze, and splashed with bright crimson.



**EVA.**—This is the purest white variety we have, and is a novelty of this year. The size is only moderate, and the centres of the flowers and the quantity of petals composing them were inclined to be weak and spare from what I have seen of it. The florets or petals curve centrewards. No doubt it may be seen in better condition another year.

**WINSOME** would seem to be poor as a staying flower, for at the exhibitions it soon faded. This is a great drawback in any Cactus Dahlia, and raisers should select varieties with stamina. The irregular petals are ivory white, and considerably broadened.

**ALBION** came forward this year for the first time, and was thought by some connoisseurs to be the best novelty of the season. The blooms remain fresh for a couple of days, and are well built and nicely filled. The long radiating petals are white, or ivory white, and strong. It is a really good Cactus Dahlia.

**ENCHANTMENT** has a greenish-primrose centre, and becomes purplish mauve towards the outer parts of the flower. It is a pretty and attractive flower, of fair size, the petals being nicely fluted.

**IDA**, as a flower, is of a deeper yellow than Mrs. E. Mawley, and probably on that account loses in delicacy. The flower furnishes an uncommon type of Cactus Dahlia, for the florets are arranged in swirlpool order, each inclined in rotary fashion. The petals are narrowly fluted and strong. It is decidedly a good flower.

**MARY FARNSWORTH** is distinctly a bicolor Cactus, the centre being soft canary yellow, while the tips of the lower petals are white. The blooms, however, are slack and poor.

**THE KING** furnishes a smart bloom of moderate size, but of good substance and firm. The florets are narrow, fluted, and incurving—qualities which one always looks for in a present-day Cactus flower—and are a deep ruby-crimson. An attractive and showy novelty.

**CLARENCE WEBB** is decidedly a good variety, of a cheery colour combination, that is, salmon centre and reddish orange petals. The peculiarly irregular disposition of the fluted and marching petals gives much charm to the flowers.

Amongst other varieties of high excellence, some of which are new and others well-known, may be mentioned the following:—Imperator, Mrs. E. Mawley, Mrs. H. J. Jones, Gabriel, Floradora, Rosine, P. W. Tulloch, Mrs. Carter Page, Mrs. J. J. Crowe, Mayor Tuppeney, J. W. Wilkinson, Lord Roberts, R. Dean, and Vesta.

#### Myatt's Fields, Camberwell.

Myatt's Fields is the name of a small public park and playing ground in Camberwell, one of the most densely populated districts in south-east London. The park is situated on part of the highest ground in the district, and is comparatively open and breezy. Villas are seen through the screen belt of trees and shrubs on every side, and the interior features of the park itself are interestingly disposed. Poplars, Planes, and Limes are the prevailing trees here, as in many other parts of London; and a diversified selection of the arborescent tribe are included, among which are berried Cratæguses, Acacias, golden and green leaved Catalpas, various species of Berberis, Genistas, Ailantus, and Rhus. Some robust Fig trees were noticed in companionship with less pretentious members in the shrubbery, and showed off most advantageously in such position. The Fig has bold and handsome foliage. Yuccas as ornamental specimens on the grass verges and by the forefront of the shrubberies, also deserve remark.

Hardy herbaceous perennials and half-hardy annuals are planted in front of all the shrubberies, to their improvement in colour, richness, and brightness. Mr. F. W. Wright is the officer in charge, and entered on his superintendence during the present year. Mr. Wright was previously head of the Victoria Gardens along the Thames Embankment, and was for a good many years "second in command" at the large Victoria Park, in the East End.

A pretty feature of Myatt's Fields is the transverse Lime avenue about the centre of the grounds, which affords a shady recess on a sunny summer day. There is a considerable amount of grass land for the use of those who practise the popular games, and all the park is exceedingly smart and well kept. The walks, so finely sanded and smooth, were an especial pleasure to me, a stranger there. A tennis lawn is provided, and the presence of a nursery within the park denotes that shrubs and bedding plants for the annual requirements are raised there. The formal flower beds are mainly situated around the large band-stand, and presented a very bright display in effective arrangements at the time of my visit in September.

#### Apples that Colour Well.

The good colouring qualities of Apple fruits is a point of prominent consideration with certain growers, market-

men in particular, and the following varieties are generally found to be characteristically brightly or well coloured:—Worcester Pearmain, Duchess of Oldenburg, Duchess's Favourite, Lady Sudeley, Devonshire Querrenden, Hoary Morning, Golden Noble, American Mother, Red Astrachan, Belle de Boskoop, Williams' Favourite, Winter Pearmain, Cellini Pippin, Tom Putt, Golden Spire, Irish Peach, Ben's Red, Red Streak, Bietigheimer Red, Okera, Ribston Pippin, Cox's Orange Pippin, King of the Pippins, Paroquet, Belle de Pontoise, Gascoigne's Scarlet, Emperor Alexander, Fearn's Pippin, James Grieve, Yellow Ingestrie, and Wealthy.—WANDERING WILLIE.

#### CYCAS REVOLUTA AT HOME.

The tall Cycas plants portrayed on this page are of interest to those of us who are accustomed to see only pot-grown specimens in the stoves of home gardens. They grew upon the site of what had once been a cemetery adjacent to the town of Paramaribo (or Surinam), in Dutch Guayana, S. America. The tallest specimen was 9ft 3in high, the second tallest was 8½ft, and the third 8ft. They were estimated to be over 100 years old. Infinitely more female than male plants are known to exist. Regarding the genus, the following notes occur in Lindley and Moore's "Treasury of Botany," part 1, page 368:—"A remarkable genus giving its name to the order Cycadaceæ. It consists of trees of no great height, with cylindrical usually unbranched stems, terminated at the top by a crown of handsome deeply cut pinnate leaves of thick texture. The male flowers grow in cones, consisting of scales bearing anthers on their under surface. The female plants bear in the centre of the crown of leaves surmounting the stem a tuft of woolly pinnately cleft leaves, in the notches of whose margins the naked or uncovered ovules are placed. The species are natives of the tropical regions of Australia, Polynesia, and Asia. *C. circinalis* furnishes in Malabar a sort of sago, which is prepared from the seeds, which are dried and powdered; medicinal properties are attributed to the seeds, but these are of little importance. The plant is said to be singularly tenacious of life. The pith in the interior of the stem of *C. revoluta* abounds in starch, which is highly esteemed in Japan. A clear gum exudes from the trunks of these trees, which is said to be employed by the natives of India in promoting speedy suppuration. These elegant species are great ornaments in our plant houses. A fine group of them and of the allied genera may be seen at one end of the large Palm house at Kew. They are popularly but erroneously called Sago Palms, as they furnish none of the sago of commerce."



Cycas revoluta at Home

# NOTES & NOTICES

## Sheffield Chrysanthemum Show.

The annual show of the Sheffield Chrysanthemum Society will be held in the Cutlers' Hall on November 14 and 15.

## Surrey County Council.

At the Egham Technical Institute, a course of twenty demonstration lessons on the principles of horticulture will be given by Wilfred Mark Webb, F.L.S., on Tuesday evenings from 6.40 to 8.40 (commenced September 30, 1902). Baron Schröder has been so good as to offer two prizes (25s. and 15s.) to be competed for by the students.

## Bolton Horticultural Society.

The opening monthly meeting of the M.I.C. in connection with the Bolton Horticultural and Chrysanthemum Society was held on Tuesday, October 7, in the Spinners' Hall, when a paper on "The Chrysanthemum for Exhibition" was read. The chair was occupied by Mr. R. Smith. The paper was one of the best and most practicable given during the existence of the society, and in a most instructive manner gave full details necessary for the successful cultivation of the Chrysanthemum.

## German School Gardens.

For nearly a century past Germany has been alive to the supreme importance of training the children of agricultural districts in the intelligent cultivation of the land. A large proportion of elementary village schools are provided with garden ground where the elder children are trained in the grafting and management of fruit trees, of vegetables, and of flowers as are best suited to the conditions of the particular district. Even town schools, it would seem, are not left out of the general scheme, and have their allotted garden plots.

## Pot-Grown Bananas.

The home-grown Bananas are greatly superior in flavour to those imported from abroad. It is not generally known that very satisfactory returns can be obtained from small pot-grown Banana plants, and at South Norwood we have seen sturdy plants bearing huge bunches in a very narrow stove-corridor, the plant, however, being in a border. At Syon House, the seat of the Duke of Northumberland, Mr. George Wythes produces heavy annual yields from a dozen plants in large pots formed of the ordinary material, and the house in which the plants are cultivated is quite a small house. The photograph of a plant shown on another page this week, bears out these remarks about pot-grown Bananas. This specimen was photographed in the gardens of Captain Belfield, at Frenchay, near Bristol.

## An Extensive Apple Orchard.

A company composed of representative horticulturists in Iowa and Missouri has been organised, with a capital stock of 1,000,000dols, for the planting of what it is claimed is to be the largest orchard in the world. This orchard is to cover 5,000 acres of ground planted with fifty trees to the acre. About 1,000 acres will be planted next spring. While the main object of the company is that of raising Apples, many Peach and other trees devoted to small fruit will be planted during the first years, in order to produce an early dividend upon the investment. It is estimated that each of the 250,000 trees to be planted will produce five bushels of Apples, thus making a total yield of 1,250,000 bushels, equivalent to about 500,000 barrels. It is expected that the bulk of this crop will be exported to Europe. During the fiscal year of 1901 the export of Apples from the United States was 840,605 bushels, of which 794,660 were sent to the United Kingdom. As showing some of the methods to be adopted, a cold storage plant will be built in St. Louis as soon as this orchard has come into bearing. This will be the main shipping point, and it is intended that the storage plant shall have a capacity for 150,000 bushels. The St. Louis and San Francisco Railroad has agreed to construct a branch of about three and a half miles through the property.

## Appointments.

Mr. Richard Wilson, gardener to Sir A. Edmonstone, Bart., Duntreath Castle, Blane, Stirlingshire, has been appointed gardener to Sir John Watson, Bart., Earnock, Lanarkshire, in room of Mr. James Moir. \* \* Mr. J. Wright, late of Hopton Hall Gardens, Wirksworth, as head gardener at The Holts, Newent, Gloucestershire. \* \* Mr. David Quinn, formerly foreman in the gardens at Obelisk Park, Blackrock, Co. Dublin, has been appointed head gardener to J. P. Goodbody, Esq., Inchmure, Clara, King's County.

## The King as Tree Planter.

His Majesty the King planted a purple-leaved Sycamore (*Acer pseudo-Platanus atro-purpureum*) in Quality Street, North Berwick, on October 10, at the request of the Town Council, in commemoration of his visit there. The tree was a well-grown specimen about 12ft high, supplied by Mr. John Downie, Edinburgh. The spade used by the King had an oak shaft and a silver blade, bearing the North Berwick coat-of-arms, with the following inscription: "Spade used by His Majesty King Edward VII. in planting a tree at North Berwick on October 10, 1902."

## Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, October 21, in the Drill Hall, Buckingham Gate, Westminster, at 1-4 p.m. A lecture on "Hardy Summer and Autumn Flowering Bulbs" will be given by Mr. P. Rudolph Barr, F.R.H.S. At this meeting the president of the society will confer the Victoria Medal of Honour on Mr. John T. Bennett-Poë, M.A., Mr. Henry Cannell, and Mr. George Massee, F.L.S., at three o'clock. \* \* At a general meeting of the Royal Horticultural Society, held on Tuesday, October 7, forty new Fellows were elected, making a total of 975 elected since the beginning of the present year.

## Oxfordshire County Council.

Some time ago we received the report of the instructor in horticulture (Mr. S. Heaton) to the Oxfordshire County Council; this report ending with June 30, 1902. The County Council trial allotments are all reported on statistically, showing the number of points accorded to each, and Mr. Heaton goes on to explain the general work of the year and what demonstrations were given. For the year sixty-one demonstrations were given, and attended by 706 persons. Many of his pupils sat for the Royal Horticultural Society's examination and proved successful. The following subjects were practically demonstrated, namely, trenching, digging, manuring, sowing, planting, potting, pruning, training, disbudding, stopping, staking, tying, propagating by grafting, layering, and cuttings, and fruit tree spraying, &c. One hundred and fifty-six lectures were given during the year, attended by 2,699 persons.

## Lilium auratum.

The figure of *Lilium auratum*, illustrated on another page, is from a photograph sent by Mr. John R. Denner, gardener at Shute Leigh, Wellington, Somerset, who writes as follows:—"The photo of *Lilium auratum* is that of a plant growing in a bog-bed, between Azaleas and Rhododendrons, as may be seen, and I think it a very unusual specimen. It may interest your readers if I give a few details of its planting and development. It was planted in this bed about four years ago; it was not a strong bulb selected for the purpose of planting out, but an exhausted bulb, turned out of a pot after blooming; and it has gradually increased in size and vigour ever since. Last year it threw one spike containing fifty-two grand blooms. [A case of fasciation.—Ed.] This year it has two spikes, as may be seen, and one of them had about forty, and the other more than 140 perfect blooms. There are other bulbs of the same variety planted in the same bed at different times, and they are all vigorous in growth, carrying twenty to forty blooms; one had sixty, but this did not perfect all its blooms. Of course it is well known that the *Lilium auratum* has proved to be hardy, and we see it at its best when grown in the open. I would like to ask if it was unusual to get so many blooms on one spike?" [It is not uncommon. At Leven-grove Park, Dumbarton, N.B., an habitually fasciated specimen bore 300 flowers, in one long raceme, this year. See page 265 of the present volume.—Ed.]



**Apples as Advertisers.**

The Canadian Office in Victoria Street is just now redolent of large and luscious Apples grown in Manitoba. These Apples are the direct result of a challenge to the effect that Manitoba was too cold a country to grow such fruit to perfection, and have been sent over here to be distributed among the different Canadian agencies scattered about the kingdom to act as advertisers of the gentle mildness of the climate.

**Scottish Horticultural Association.**

Through an error in our reporter's notes on page 344, we regret that the credit of the very meritorious collection of Sweet Peas shown at the latest meeting of the Association was not given to Mr. Thomas Duncan, Foggo Schoolhouse, Berwickshire, who was the grower and exhibitor. As already stated, they were wonderfully fine for the late period of the season, being rich and fresh in colour, perfect in bloom, with long flower stems.

**Rose Growing in London.**

A Liverpool paper says the Rose growing industry in the suburbs of London is reported as becoming less remunerative year after year. An instance is given in which one of the biggest growers at Lower Edmonton sent a large number of boxes to Covent Garden Market. Each box contained about 300 cultivated Roses, and although 5s. a box has been considered a very low price, he was unable to realise even 1s. per box. The Roses had to be taken home, and some were sent round to the hospitals.

**Fruiterers at the Mansion House.**

The Lord Mayor of London on Tuesday evening presided at the annual banquet of the Fruiterers' Company, and the company included the Lady Mayoress, Mr. J. Lea-Smith, the Master of the Fruiterers' Company, and Mrs. Lea-Smith; Mr. W. O. Clough, Chairman of the General Purposes Committee, and Mrs. Clough; Sir Henry and Lady Knight; Sir T. H. Elliott, Secretary to the Board of Agriculture, and Lady Elliott; Sir John and Lady Bell; Sir E. Clarke, Secretary to the Royal Agricultural Society, and Lady Clarke, and a large number of ladies and gentlemen connected with the City and the Fruiterers' Company. The offering of fruit which Mr. J. Lea-Smith then made on behalf of the Company of which he is Master included a magnificent collection of English-grown Pears, Apples, Grapes, Melons, and other fruits, which were arranged with great taste and effect in the drawing-room. It was urged that home produce might supersede much of the foreign fruit and vegetables which now come into this country, and Mr. J. Lea-Smith, in reply, explained that the Fruiterers' Company, although a comparatively poor one, had endeavoured to stimulate in various ways the efforts of home growers.

**Emigrants' Information.**

The October circulars of the Emigrants' Information Office and the annual editions of the penny handbooks show the present prospects of emigration. The notice boards are now exhibited, and the circulars may be obtained free of charge, at more than 900 public libraries, Urban District Councils, and Institutions throughout the country, or from 31, Broadway, Westminster, S.W. In Canada it is too late for emigrants to go there this year. In New South Wales, the country districts are suffering most from the severe drought, and in some parts it is impossible to obtain employment owing to want of water, and of feed for stock. In Victoria there is no general demand for more labour, and many men are out of work. No large public works are being proposed by Government which might provide employment. The drought has long pressed heavily on large portions of the State, and seriously affects pastoral, agricultural, and mining industries, but useful rains have lately fallen. There are excellent openings, as a rule, in this and the other Australian colonies, for farmers, dairy farmers, and fruit growers, if they have a little capital, and some experience of the country. In Western Australia there is a good demand for agricultural labourers in many districts. In Tasmania there is a moderate demand for skilled farm hands and female servants. In New Zealand there is a good opening for farmers with capital, farm labourers, miners, and female servants. In Cape Colony there is no demand for general or farm labourers, who are mainly coloured men.

Permits are required by those going to the Transvaal and the Orange River Colony, but not for Cape Colony. These will not be valid unless endorsed by the representatives of those Colonies at the port of disembarkation.

**Hastings and St. Leonards Horticultural Society.**

Mr. James Stredwick, the Cactus Dahlia specialist, will give a lantern lecture to the above society on October 23, his subject being "The Cactus Dahlia."

**For the Children.**

Messrs. Treherne and Co., Limited, publishers, 3, Agar Street, Charing Cross, W.C., are offering a prize of £5 for the best 300 word essay on "The Cat," written by a boy or girl under the age of fifteen.

**American Plant Breeding Conference.**

The International Conference on Plant Breeding and Hybridisation was held, by the kind co-operation of the American Institute, in the rooms, Berkeley Lyceum Building, 19-21, West 44th Street, New York City, on September 30 and October 1 and 2, 1902. Professor Bateson, of Cambridge University, England, and Mr. George Nicholson, formerly curator of Kew Gardens, London, reached New York on September 24. The proceedings of this Conference, compiled and published in pamphlet or book form, should prove one of the most valuable additions to modern American horticultural literature, along the lines that were taken up and discussed.

**Weather at Temple House Gardens.**

The rainfall at this place, Great Marlow, for the month of September, 1902, was 1.15in. The maximum temperature for the month was 72deg on the 1st and 22nd, and the minimum 34deg on the 18th. There were six foggy mornings during the month; thunder at 6.30 p.m. on the 10th, and very rough winds on the 3rd, 4th, and 16th. The maximum temperature for September, 1901, was 73deg on the 8th and 29th, and the minimum 36deg on the 15th. The rainfall for September, 1901, was 1.18in.—G. G.

**Sussex Weather.**

The total rainfall for the past month at Abbot's Leigh, Hayward's Heath, was 0.54in, being 2.23in below the average. The heaviest fall was 0.13in on the 2nd and 5th. Rain fell on ten days. Total for the nine months, 17.75in, which is 2.52in below the average. The maximum temperature was 73deg on the 1st, 10th, and 11th; the minimum, 35deg on the 19th. Mean maximum, 66.07deg; mean minimum, 47.03deg; mean temperature, 56.55deg, which is 0.36deg below the average. A dry cool month; the wind was in a northerly direction sixteen days. October has come in with a strong N.E. wind.—R. I.

**September Weather at Belvoir Castle.**

The prevailing direction of the wind was N.W. total eight days. The total rainfall was 1.15in, this fell on fourteen days, and is 1.17in below the average for the month; the greatest daily fall was 0.46in on the 10th. Barometer (corrected and reduced): highest reading 30.504in on the 26th at 9 a.m.; lowest 29.425in on the 3rd at 9 a.m. Thermometers: Highest in the shade 72deg on the 1st; lowest 34deg on the 25th; mean of daily maxima 62.73deg; mean of daily minima 46.46deg; mean temperature of the month 54.59deg; lowest on the grass 28deg on the 25th; highest in the sun 125deg on the 1st; mean temperature of the earth at 3ft 55.90deg. Total sunshine 141 hours 25 minutes, which is 13 hours 5 minutes below the average for the month; there were three sunless days. The temperature has again been much lower than usual.—W. H. DIVERS.

**A Royal Visit.**

On the occasion of His Majesty's short visit to North Berwick—from Thursday evening to Saturday morning last week—the Prime Minister on Friday, the 10th instant, drove the King in his motor-car to Whittinghame and through the grounds, on the return journey calling at Tynninghame, the Earl of Haddington's seat. During his stay there His Majesty inspected the gardens, devoting his attention more particularly to the mixed borders in the walled garden, to the "yellow" borders, and to the long Apple-covered walk. Though so late in the season, the garden devoted to bedding plants, and also that to old-fashioned flowers, were bright with bloom. The King, who, it is well known, is a good gardener, expressed his appreciation of the beauties of this Scottish domain, and previous to his departure planted an Oak tree as a souvenir of his visit. An illustrated description of Tynninghame will be found in the issue of this Journal for March 13 of the present year.



### A Birmingham Amateur's Collection.

The collection figured on page 361 is that of Mr. J. Austin, 25, Alder Road, Sparkbrook, Birmingham, who sends a few particulars regarding his flowers. It is seven years since he commenced gardening as a hobby, and has but a small garden—20yds long by 5yds wide, in a thickly-populated district. Mr. Austin is a metal worker, and works fifty-four hours per week in a manufactory situated two miles from his home. He has two glass houses, and started with six Chrysanthemum plants given to him by a friend, and he was so delighted with them that he determined to increase his stock to thirty plants, which he did, and grew them with much care, being ultimately rewarded with a goodly crop of blooms. In the third year (1897) he further added twenty more to the number, this making fifty in all, and yet again in the following year he found space for another fifteen. Mr. Austin joined the Birmingham and District Amateur Gardeners' Association in 1898, and on November 9, 1898, made his first venture as an exhibitor. His success was beyond his expectation; he gained two first prizes and one third prize. This persevering and enthusiastic amateur has since then won many other prizes and special certificates, including a silver medal for a group of Chrysanthemums and foliage plants in pots on November 21, 1900. On the same occasion he gained five firsts and a certificate of merit for a bloom of the incurved variety James Agate. Amongst his list of varieties with which he was most successful, our correspondent names the following Japs.: Nellie Pockett, Madame Gustave Henry, Lady Hanham, Mrs. Barkley, Emily Towers, Lady Ridgway, Mrs. G. W. Palmer; and such incurveds as C. H. Curtis, James Agate, Lady Isobel, Topaze Orientale, Hanwell Glory, Baron Hirsch, and Louise Giles. He has now over 100 plants. Altogether with a total of eighty-three prizes from November 1, 1898, to November 21, 1900, Mr. Austin has a very wonderful and creditable record. Last year (1901) he secured one silver-gilt, three silver, and two bronze medals.

### Too-much alike Varieties.

Societies that are affiliated with the National Chrysanthemum Society, are directed to the undermentioned synonymous or too-much-alike varieties which so nearly approach each other in general appearance that they must not be shown on the same stand.

#### INCURVED VARIETIES.

|                           |                             |
|---------------------------|-----------------------------|
| { Empress of India        | { Lady Dorothy              |
| { Lady H. St. Clair       | { Charles Gibson            |
| { Mrs. Cunningham         |                             |
| { Snowball                | { Lord Alcester             |
| { White Queen             | { Princess Imperial         |
| { Golden Empress of India | { Miss M. A. Haggas         |
| { Bruce Findlay           | { Richard Parker            |
| { Golden George Glenny    | { Mrs. George Rundle        |
| { Mrs. Dixon              | { Mrs. George Parnell       |
| { Mrs. C. H. Glover       |                             |
| { Laline                  | { Mrs. W. C. Egan           |
| { Mrs. A. Jacks           | { Countess of Warwick       |
| { John Doughty            | { Princess of Teck          |
| { Mrs. Robert Mudie       | { Charles Shoesmith         |
| { Bronze Queen of England | { Christmas Number          |
| { John Lambert            | { Princess of Wales         |
| { Golden Queen of England | { Beauty of St. John's Wood |
| { Emily Dale              | { Mrs. Heale                |
| { Emily Dale Improved     | { White Princess            |
| { John Salter             | { Queen of England          |
| { Mr. Howe                | { Blush Queen of England    |

#### JAPANESE VARIETIES.

|                        |                          |
|------------------------|--------------------------|
| { G. J. Warren         | { Pride of Madford       |
| { Yellow Madame Carnot | { Beauty of Teignmouth   |
| { Madame Louis Remy    | { Sunflower              |
| { Lady Ellen Clarke    | { Swanley Yellow         |
| { Mrs. C. Blick        | { W. Slogrove            |
| { Mrs. Richard Jones   | { Improved W. H. Lincoln |
|                        | { T. Selwood             |

#### HAIRY VARIETIES.

|                          |                |                |
|--------------------------|----------------|----------------|
| { Enfant des deux Mondes | { Hairy Wonder | { Esau         |
| { White Louis Boehmer    | { R. M. Gray   | { Princess Ena |

## A Chat About Bulbs.

It is better to be in good time over making out the bulb order than to delay until late in the season, when the bulbs should have been either potted or planted. There is a tendency on the part of some people to put off sending their order as long as possible. Then, when they receive their Hyacinths or Tulips in an advanced stage of top-growth, and spike and flowers resulting are weak and spindly, or, in the case of Tulips, many may be "blind," they sit down and indulge in long letters to the vendors upon the inferior stamp of bulbs which have been supplied to them.

I am by no means laying down the dictum that all bulbs which have commenced top-growth will of a necessity be unsatisfactory after planting, for I have seen late-planted Tulips succeed fairly well when not placed in the ground much before Christmas. This was an exceptional case, and the safe rule is to get them planted in suitable weather during October.

"Where shall I get my bulbs from?" is a question frequently put and not difficult to answer, so long as the needful cash is forthcoming. Our home growers are producing Narcissi in great quantity and variety nowadays, also other bulbs such as Snowdrops, Scillas, &c. The bulk of the Hyacinths and early-flowering Tulips must, I think, continue to come from the Continent, as we cannot compete with the growers there owing to climatic and soil difference, as well as the greater cheapness of labour abroad in the bulb-growing districts. It is, however, possible to so arrange our orders that the home grower, as far as possible, may benefit.

Those that are not grown in this country the buyer has the option of obtaining through an English firm, or direct from the foreign salesmen or growers, who now have—some, at least—representative agents here. I fail to see much benefit accruing to the buyer for sending across to Holland, as by dealing with any of the well-known houses which advertise in this journal he is sure to receive (so far as may be) value for money.

Roman Hyacinths and Roman and Paper-white Narcissi which are needed for November and December blooming should be ordered without delay, and immediately on arrival ought to be potted or boxed according to the requirements of the grower. It is not necessary to go into cultural details after all that has been written upon the subject in these pages.

The soil used, however, is an important factor for or against success. This should be light, rich, and open. Remember the Dutchmen rely chiefly upon cowdung and sand for the growth of the splendid bulbs they send us. Loam, leaf mould, and well rotted manure in equal parts, well mixed together, with plenty of silver sand is what I generally use, and with fair success.

Do not be in a hurry to get your bulbs housed and out of the plunging material, whether this latter be of ashes, cocoa-nut fibre, or any other medium. Let the pots be full of roots, or nearly so, and then you may feel safe as to the future of the leaves and flower-spikes, after culture being what it should. A sudden transition from total darkness to full light is to be avoided, and must be guarded against by partially shading the blanched growths for a few days. By placing them in the semi-darkness beneath the greenhouse stage, the danger of a check from such a sudden change of circumstances may be avoided.

There has been a good deal of discussion at one time or another as to the relative values of ashes and cocoa-nut fibre as a plunging material. Well, owing to the greater comfort and cleanliness in working amongst the fibre, I should certainly always prefer to use it; but when one cannot get fibre, then the next best thing is undoubtedly coal ashes, and so far I have never discovered any advantage, in the growth of the bulbs, from the use of one more than another.

To return to the subject of buying once more. Some of us have a longing and a desire to attend the autumn sales and see what cheap bargains we can pick up. I have had some experience of buying in this manner, and I cannot say that I have gone away dissatisfied with my purchases. But let not the inexperienced person go alone on such an errand, for he may find himself sent either very full or empty away. That is to say, he may perhaps obtain a great quantity of those sorts he does not want, and which are of little value to him, and of those which would be of use he has none, or very few. It is astonishing how many bulbs, both in number and variety, it is possible to obtain in a guinea collection. For the amateur with small means of accommodation this is an excellent plan of obtaining bulbs; half-guinea collections giving good results upon a smaller scale still.

In an article of this description it is usual, if not always advisable, to say something about Hyacinths in glasses or vases. Candidly, I am not in favour of this method of culture. That it is cleanly and, as a rule, fairly successful, I at once admit, but it seems a little bit unnatural to my way of thinking that the chief organs of supply in the plant's economy should be exposed to the vulgar gaze. Besides this, though at times one sees really fine spikes grown in glasses, they are seldom as satisfactory as



those grown in pots. The treatment is of the simplest. Place the Hyacinths upon the glasses containing sufficient water to touch the base of the bulbs, and keep them in a cool, dark position until growth has become active, when they may be brought to the light of a window. The water in the vases will need replenishing from time to time, and the flower-spikes will need support.

Sound bulbs, rich, light soil of an open sandy nature, with an absence of unduly hard forcing, and giving ample time for roots to form in the plunging bed: here you have all the secrets (which are very open ones) there are in connection with the successful treatment of many of the charming and beautiful things which come under the category of bulbs.—J. W., Newent.

## Hot Water Boilers.

Mr. Louis Pearson (of Beeston) recently read before the Institute of Heating Engineers a paper on "Hot Water Boilers," in which there are several practical hints to those interested in horticultural work. Mr. Pearson shows that old cast iron boilers were both economical and efficient, but they were discarded on account of their faulty jointing and unequal thickness of metal, both of which defects have now been overcome in the modern boilers. He prefers cast iron boilers to those wrought in iron and steel, as the iron boilers can be made in sections, which enable them to be fixed in positions where wrought boilers could not be; it also enables the firebox to be made in deeply corrugated or tubular forms, which not only present a much larger surface to the direct action of the fire, but also tends to check the flow of gases and mix them thoroughly with the oxygen, thereby causing better combustion and economising fuel. Cast iron is also much less affected by oxydisation, which is a great consideration in our climate. Also experiments made by the Philadelphia Scientific Institute show that as a transmitter of heat, cast iron is more efficacious than wrought by over 10 per cent.

However, the chief reason for the greater economy of cast boilers is due to the corrugations and the tubes that can be readily and cheaply placed in the firebox, which not only add very largely to the direct heating surface, but break up and thoroughly mix the gases as they leave the firebox, causing a better combustion. The matter of combustion should be fully considered before designing a boiler of any description or criticising those already made. Heat is caused by the chemical union of various elements, and as there is only one part of oxygen to four parts of nitrogen in the atmosphere, we see the necessity of introducing a large amount of air to insure perfect combustion. Mr. H. J. Mills, in his treatise on boilers, puts the amount of air required to consume one ton of coal perfectly at 120,000 cubic feet. It will be seen from the foregoing remarks the reason for a thin fire giving a much better result than a thick one.

As a rule it is safe to say that the smaller the fuel the thinner the fire should be, and the larger the fuel the thicker, on account of the larger interstices in the use of the latter. It is a common practice to leave the fire door open for a short time after firing, to consume the smoke; this, of course, is wrong, for though you get a large supply of oxygen, yet, as it is at a low temperature, it does not therefore combine properly with the gases. The boiler, too, is being cooled instead of heated, and in the case of wrought iron or steel, it also proves injurious to the plates. Damp boiler holes are often a source of considerable trouble to both heating engineers and their clients, and most of the trouble is caused by engineers trying to keep water out of stokeholes built with flat sides and bottom, by merely laying the bricks in cement, or lining with Val de Travers, without considering the pressure. This is very considerable, for the total amount of a boiler house floor, 15ft by 10ft by 5ft deep, supposing the subsoil water to be level with the top of the brickwork, is 54,000lb or nearly 25 tons. It is, therefore, quite apparent that this must be provided for. With small, medium-sized boilers the simplest and best way is to place the boiler in a wrought iron tank, which should be well tarred, inside and out, and paved with blue bricks. Where the boiler is very large, there should be an inverted arch built under the floor of the stokehole and tied to the walls, which should be at least 14in, and have an inch space left between the 4½in and 9in work, to be afterwards filled with Val de Travers. Even with this plan the workmanship and material must be of the best to ensure success.

### An American Forestry Magazine.

Arrangements have been made for the publication of the "Magazine of Arboriculture" as the official organ of the International Society of Arboriculture, and will have as its distinctive purpose forest perpetuation. The secretary of the society, J. P. Brown, Connorsville, Ind., will act as Editor. The society claims the credit of having induced the planting of over 1,000,000 trees.

## Hardy Peat-Loving Shrubs.

A large proportion of the hardy shrubs which require soil free from lime, and prefer that of a peaty nature for their successful cultivation belong to the great family Ericaceæ, and are characterised by their compact habit, beautiful flowers, and suitability for small gardens. With the exception of the stronger growing species of *Arbutus* and *Rhododendron*, very few grow more than 5ft or 6ft high, while quite a large number make carpet-like masses of less than a foot in height. A peculiarity of the family is the number of genera it contains, which are made up almost entirely of ornamental species, *Erica* and *Rhododendron* being cases in point.

A small garden, situated in a district where peat-loving plants thrive, might be made beautiful and interesting by using nothing else but these plants, and flowers could be had during the whole of the year, except, of course, throughout prolonged spells of frost. As early as January *Rhododendron* and *Erica* flowers are to be found; while a succession is kept up throughout spring, summer, and autumn until various species of *Arbutus*, *Erica*, and one or two *Rhododendrons* take up the running in October, November, or December, and finish up the year with bright coloured blossoms. Of the large number of subjects suitable for planting the following is a selection of the most ornamental.

Although a great many names of *Arbutus* are found in catalogues, the number of really hardy species is three, and these, together with a number of varieties and one or two hybrids, make up a very useful group. As a rule, they form dense shapely bushes, 8ft to 12ft high, but one species, *A. Andrachne*, from the Levant, grows much taller, and assumes the dimensions of a small tree. It is a remarkable looking plant, especially about the end of summer when shedding its old bark. The flowers are white, and borne in large panicles.

Of the whole family, probably *A. Unedo* is the best known. It is a capital subject either for a shrubbery or specimen plant, as it grows into a fine shapely bush 10ft to 12ft high, flowers freely, and bears showy orange and scarlet fruits on pendulous stalks, from which the common name of Strawberry Tree is taken. A number of varieties are in cultivation distinguished by differences in stature, size, and shape of leaves, and colour of flowers. The flowers vary in colour from white to deep rose, and a succession is kept up from October until January. Of the several varieties, some of the most distinct are *microphylla*, *quercifolia*, and *rubra*. Another species not so often met with is *A. Menziesi*, from N. America. Of the few hybrids, that known as *hybrida*, the progeny of *Andrachne* and *Unedo*, is the most distinct.

Leaving this genus, and turning to the large family *Erica*, we find a great many species worthy attention. Conspicuous among them are *carnea* and its variety *alba*, which commence to flower in February and continue in good form until the end of March; *mediterranea* and its various forms, which all flower in spring, particularly the plant known as *hybrida*, an offspring of the two above mentioned species. This commences to flower in January, and continues to so for quite three months, and is without doubt one of the most useful of dwarf flowering shrubs. A summer flowering species of considerable merit is *cinerea*; the flowers of this are rosy red, but there are varieties with white, rose, deep red, and reddish purple flowers. For autumn *E. vagans* and its varieties may be depended on to make a fine display; whilst *ciliaris*, *Mackii*, *multiflora*, *Tetralix*, and *Watsoni* also flower late in the year. In warm localities this list may be lengthened by the inclusion of such fine flowered species as the red flowered *australis*, the white *lusitanica*, *stricta*, *scoparia*, and others. With the Heaths might be included the *Ling*, *Calluna vulgaris*, of which quite a score of varieties exist, varying in habit from dwarf pigmy forms an inch or two high to forms 2ft in height, and in colour of flowers from white to red. Colour of foliage also adds to the varietal list, for there are golden and white variegated leaved forms.

Following this large family come a number of small genera, all extremely interesting, and the majority beautiful. Mention need only be made of *Andromeda polifolia*, with pretty pink flowers; *Pieris japonica*, with large drooping panicles of white blossoms, or *P. floribunda*, with upright racemes of white flowers; *Zenobia speciosa*, a neat shrub with pretty, waxy white blossoms, borne in May and June;

or, better still, its white leaved variety, *pulverulenta*, *Bruckenthalia spiculifolia*, a neat, Heath-like plant, with upright heads of pinkish white flowers; *Bryanthus empetri-formis* and *erectus*, neat plants with red flowers; *Oxydendron arboreum*, a deciduous plant which bears panicles of cream coloured flowers in summer; *Daboecia polifolia*, which from May to November is rarely without blossoms, of this there are forms with white, red, and pink flowers; *Enkianthus campanulatus cernuus*, and *japonicus* should all have a place, as also should *Cassiope tetragona*, *Cassandra calyculata*, *Leiophyllum buxifolium*, and the various species of *Leucothé*.

Turning to larger genera again, our attention is directed to *Kalmia*. Of this three species and numbers of varieties are in general cultivation. The largest growing is *latifolia*. It grows sometimes upwards of 12ft high, but is more often met with less than half that height. It is conspicuous by

layan species can be grown out of doors, but as far north as London very few succeed in a satisfactory manner out of doors. Hardier species, however, thrive, and there are varieties innumerable for all who care to grow them. Some of the hardiest evergreen species about London are *californicum*, *campanulatum*, *catawbiense*, *cinnabarinum*, *dauricum*, *ferrugineum* and varieties, *fulgens*, *Wilsoni*, *hirsutum*, *intermedium*, *Smirnowi*, *racemosum*, *Thomsoni*, and others. Deciduous species, such as *calendulaceum*, *flavum*, *nudiflorum*, *occidentale*, *sinense*, *Vaseyi*, and *viscosum*, together with their progeny, should be found in every garden.

Ornamental fruited plants should be found represented in our peat garden by *Gaultheria procumbens* and *G. Shallon*, and by the varied forms of *Pernettya mucronata*. The list of names mentioned above is sufficiently long to show what a wealth of really good flowering plants is contained in the



**Chrysanthemums: A Birmingham Amateur's Collection.** (See page 359.)

reason of its deep green Laurel-like leaves and pink and white flowers. *K. glauca* is a dwarf semi-deciduous species with rosy-purple flowers; while *K. angustifolia*, a plant which grows from 1½ft to 2ft high, and bears red flowers with great freedom, is one of the gems of the garden. Of this there are several varieties. All three species are North American.

*Ledums* should find a place in our peat garden, the two species, *latifolium* and *palustre*, making shapely white-flowered bushes. *Rhodothamnus chamæcistus* is a gem of gems, and is worth going to a lot of trouble over. It is quite a dwarf plant, coming very near to *Rhododendron*. It is of Heath-like habit, and bears pink and white flowers nearly an inch across. It succeeds best grown in crevices between rocks, and is one of the few members of *Ericaceæ* which is partial to a little lime.

The genus *Rhododendron* contains so much that is good that it is impossible to do more than give it brief notice in passing. In the S.W. counties most of the lovely Hima-

group under notice, and a little consideration will suffice to show how beautiful and interesting a peat garden can be made.—W. D., Kew.

#### English Gardeners in Canada and America.

The transatlantic horticultural papers have recently accorded notices to a number of natives of these Isles, chief among them being Mr. Joseph Bennett and Mr. James W. Dunford. Mr. Bennett is the retiring president of the Canadian Horticultural Society, and was born at Northwold, Norwich, England, in 1858. He served as a gardener at Messrs. Veitch's, Limited, also at Cutbush's and Coombe Abbey, besides at Sir H. Tate's (now Lady Tate's) place in Streatham. He went to Montreal in 1884. Mr. J. W. Dunford was for five years with Messrs. Sutton and Sons, and went to the States in 1888. He started in business for himself in 1894, and now has 45,000 square feet of modern glass houses.





#### Hydrangea Names.

It is not a common error—nevertheless, one not unknown—for persons to designate the well known hardy *Hydrangea*, *H. paniculata*. Nurserymen, observes Mr. Meehan in the "Florists' Exchange," receive orders for this subject, and in nearly all cases assume, correctly, the customer means *H. paniculata grandiflora*—a very different thing. There is in cultivation *H. paniculata*, and a very good plant it is. The flowers on the panicles are not numerous, hence do not weigh down the heads, and each head stands boldly erect on a perfectly straight shoot. It is a good and showy shrub, but not having the mass of the *H. p. grandiflora*, it does not make such a grand showing. But it is a good thing, and is extensively used for massing.

#### Treatment of Box Edgings.

The best time of the year for clipping Box edgings where employed in garden walks is September or early October. Where edgings of this kind have been neglected and plants have grown coarse and strong—and perhaps have become intermixed with weeds and grasses—the most effective method of renewing the edging is to have the whole of the plants dug up and replanted. After being dug up in this manner the old plants should be divided out into pieces, taking care that upon each such piece portion of the roots is allowed to remain. The longer roots attached to these slips should then be cut off and the plants freshly put in along the original line of walk, care being taken in the meantime to have the soil underneath and about them thoroughly dug up and cleared of all roots of weeds or other extraneous growth.

#### *Helenium pumilum magnificum*.

Nearly every devotee of hardy plants is acquainted with the beauty and merits of *Helenium pumilum*, and those who do not know it should constantly be reminded of its value in the garden with its large yellow flowers. These are produced in the greatest profusion on plants running from 2ft to 3ft in height, according to the character of the soil and the moisture conditions. The golden-yellow flowers are about 2in across, and are very beautiful with their high centres and pretty ray petals. In every way superior, however, is the variety named *magnificum*, which is one of the best hardy plants now in cultivation. It is rather taller in growth, though that is not always an advantage. The flowers are also larger and of a lovely yellow shade. It seems to me to flower even more freely than the typical *H. pumilum*, and it is in almost all respects a much finer plant. It makes a capital plant for the exhibition stand, though it does not show to advantage if a big bunch is shown with all the blooms crowded together. It should be loosely arranged with a good length of stem. It can be easily grown in any good soil.—S. ARNOTT.

#### *Helianthus*, Daniel Dewar.

We have Sunflowers galore, and it takes something distinct and good to make a place for itself. In its own way *Helianthus* Miss Mellish is unsurpassable, though its rambling habit is such that it requires to be carefully kept from encroaching on its neighbours in the border. It ought, indeed, to have a place to itself. The same character is the defect of the newer one, *H. Daniel Dewar*, raised a year or two ago by Mr. M. Cutlibertson, of Rothesay, and only now becoming known in gardens. It also has a most encroaching habit, and wants to be placed where it will not eject or smother other flowers. Yet it is worth a good place if only for the sake of its flowers for cutting, for they are to the Sunflowers what the Cactus Dahlias are to the other forms of these popular flowers. The petals are prettily twisted, and the whole appearance of the flower is altogether informal, though, of course, one cannot say that *H. Miss Mellish* is formal either. The flowers of *H. Daniel Dewar* are smaller than those of *H. Miss Mellish* and are of great value for cutting, if this is done before the flowers are too fully open, as they then last much longer in a cut state. As a garden plant, too, this Sunflower is quite effective.—S. A.

#### A New Industry—Crab Jelly.

Probably owing to the deficiency of fruit, including the Apple crop, on the other side of the Channel this year, there is great demand for Crabs and the wild Apples of the hedgerows. Mr. Clifford, T.C., Clonmel, and Messrs. Skehan, Carrick-on-Suir, are catering to meet this want. Whole drayloads at a time have been sent by rail, generally to Liverpool or Manchester, where they meet a ready and profitable sale. The season for Whortleberries and "fralawns," or hurts, for jam making, is over, and that of Blackberries has scarcely arrived. The jams made from those are most welcome to the teeming millions of Glasgow and Lancashire. But is it not to be regretted (says the "Nationalist") we have not small capitalists at home to run such a factory—keep the people employed, and help to realise fortunes for themselves or their shareholders, instead of having all going to our more wealthy neighbours?

#### A Meritorious Annual.

The plant referred to is *Callistephus hortensis*, which grows 1½in to 2ft in height, and is terminated by large mauve-purple flowers, in form like those of a very large single *Pyræthrum*; they are distinctly decorative. *Callistephus hortensis* is the original species from which the numerous varieties of China Aster in cultivation have been produced. Recently we were greatly delighted to see a "lakelet" of the beautiful flowers of this plant sheeting the ground on the fringe of a shrubbery-copse in an outlying and sequestered part of the Royal Gardens at Kew. The plants furnished a most delightful and effective show from a distance, there being tall plants of the quick growing and handsome *Impatiens Roylei* through and amongst them, the whole mass of flowers winding out and in among the Cyprus and Yew trees. Seeds of the Aster had simply been scattered about among the half-bare patches of soil in spring time, and this was the successful result. The feature should be widely copied; it is magnificent.

#### *Aster Thomsoni*.

It is gratifying to see that this pretty Himalayan Starwort is growing in favour, and I am satisfied that those who already possess it will not regret having added it to their gardens. It is now a good number of years since I was introduced to it by one of our most eminent hardy plantsmen, who sent me a plant with some appreciative remarks. It deserved them all, but the plant itself seemed to make its way slowly into other gardens. It is now fairly well distributed, and most nurserymen who grow a collection of such flowers keep it in stock. I have come across it several times in gardens this year, and everywhere it has been spoken of with approbation. Its early flowering is a distinct advantage, as it comes into bloom in July as a rule, though late this year. It lasts well through August, and in colder gardens blooms into September, commencing to flower a little later than in the warmer districts. It grows from 1ft to 2ft high, and has large pale blue flowers of much beauty. They remind one of the blooms of the fine *Aster Amellus bessarabicus*. *A. Thomsoni* is quite hardy, and seems to me to dislike a very dry and poor soil.—A.

#### *Cytisus præcox*.

The Brooms are always favourite plants, and a good collection of the *Cytisuses* and the allied *Genistas* are a most attractive feature of a garden. I do not think, however, that there is any one so much admired as *Cytisus præcox*, a true "cream" Broom, though it opens a very pale yellow. For one thing, it is a splendid doer in dry soil, and it never fails to cover itself with a perfect veil of lovely little flowers. It is one of the small flowered Brooms, so that those who expect to have from it the larger blooms of *Cytisus scoparius Andreanus*, or *C. biflorus* even, might possibly be disappointed. Size is not, however, everything, and both for beauty and for profusion of flower *C. præcox* will more than hold its own with any member of its charming family. I have a fine plant in my garden which increases in size and beauty every year, and is a perpetual object of admiration when it is in bloom. It is so fine that one will not grudge to divert the path on which it rather encroaches to secure an even better display in early spring, for it is one of the first of the genus to bloom. After flowering it is cut well in, but requires no further attention. It was raised at Warminster, in Wheeler's Nursery, and is supposed to be a hybrid of *C. purgans* and *C. albus*.—R. N. T.



### An Abnormal Pear.

Referring to the abnormal Pear shown before the Scientific Committee of the Royal Horticultural Society on September 23, I recently saw a fruit, which appeared to be one of the Bergamottes, bearing a circlet of small leaves. The upper portion of the Pear was round and flattish, shrinking suddenly to a waist-like depression, then swelling again down to the base. The leaves were growing from the waist. The Pear also bore two eyes other than the one at the base. These were located about half way up.—W. A. T.

### Red Spider and XL All.

Having used XL All vapourising compound since its first introduction to the public, I myself have never known it to kill red spider. But to show that "H. D." is not the only one who has succeeded in killing it with XL All, I will briefly relate what a shrewd and clever gardener said to me a few weeks ago, and perhaps if this note comes under his notice he may give the readers of the Journal the benefit of his experience in its use on that occasion. I can give no details, but will merely say that he succeeded in killing the spider by giving a second fumigation immediately the contents of the fumigators were exhausted, which second filling took place about nine at night. In the morning every spider appeared to be dead.—J. EASTER, Nostell Priory Gardens.

### Garden Inventions.

There is no doubt that a great number of garden tools and appliances are capable of considerable improvement. But, as an inventor in a small way myself, I would advise any gardener, who is no longer young, or is apt to expect too much, or be irritable at disappointment, to leave the question of patents, or "bringing out" his invention alone, save for his own use. It is a rare thing for the actual inventor of any improvement to make much profit by his discovery, and not a few have sustained serious losses. It seems rather cowardly advice to give, and is not meant for the young and energetic, with a good deal of commercial knowledge and aptitude, plenty of time to spare, and plenty of money to risk; but for those who are short of these requisites I would advise selling the idea as soon as possible to someone who has (or thinks he has) got them.—W. R. RAILLEM.

I have read with great interest Mr. J. Barkham's letter (page 320), which shows, as I had expected, that there are men in the gardening profession with fertile brains, capable, if given the necessary encouragement, of improving most of the gardening appliances which we have in use at the present day. "Necessity is the mother of invention," and although I cannot claim to be an inventor myself, owing, perhaps, to my not having the good fortune of being "born that way," I think all the help possible should be given to anyone possessed of this very special gift, for no one will deny that it is a gift, instead of having, as in "J. B.'s" case, to hide their light under a bushel, as it were. "Squib," in his letter on the same page, puts forward three very novel suggestions having for their object the improvement of the spade, barrow, and rake respectively, and these on paper may look very well; but it would be interesting to learn how they would work out in actual practice. Some of the most important qualifications an invention should possess before being placed on the market are (1) efficiency, and (2) durability, each most important factors in any garden implement. At the same time, it should be as neat and as light as possible, having due regard for the work which it is intended to perform. Above all these, it should also be easily worked; and inexpensive. It should also be borne in mind that the simpler it can be made, the more likely it is to take on when placed before the public. It seems hard indeed, when a person has succeeded in perfecting some appliance in daily use, that he should be denied the just reward which his skill and ingenuity deserve, owing either to lack of the necessary funds or influence. I quite agree with "J. B.'s" suggestion for an article or series of articles written by an experienced man, showing the best way to patent an invention and place it on the market in a proper manner, so as to attract the attention of all those whom it would be most likely to benefit. An article of this description would, I believe, be read with great interest by all gardeners and nur-

serymen. Most inventors are very modest about their achievements, and very often only those living in the immediate neighbourhood are aware of an inventor's discovery. This may be accounted for in two ways: firstly, owing to the expense incurred by having the patent protected, and the cost of advertising, which would be a great drain on a gardener's all too slender purse; secondly, even if he consented to this initial outlay, there is the risk of ultimate failure and disappointment, owing to his invention not meeting with the approval of the public. The only remedy that I can see in this case is to submit the invention to some large horticultural sundriesman, who might be induced to buy it outright and take all the risks himself.—H. MUNCY.

### Leaf Decoration.

Respecting the use of leaves referred to on page 303, may I suggest another interesting amusement, viz., making plaster casts? A plaster worker explained the process to me, and for studies the effect is very fine. An examination of a leaf will show that the veins on the reverse side are identical with the front, with the difference that they are raised instead of being depressed. It naturally follows that a casting of the back gives an impression of the front appearance. Selected leaves of good form should be chosen, and fastened securely to a board, face downwards. A small quantity of plaster of Paris should be mixed to the consistency of thick cream, and this dipped out with a spoon and placed carefully all over the surface of the leaf, in a very thin layer. So soon as it has set, another lot should be mixed and added on top of the first, repeating until the plaster is sufficiently thick to bear handling. When well hardened, remove from the board and detach the leaf. Should it have stuck, careful soaking with hot water will remove it. This trouble may possibly be obviated by applying a thin coat of oil, but it probably would affect the plaster, so I have not tested it. A fine file, or a penknife will trim the outer edge to the natural form. These castings may be used for numerous purposes, and a colour artist might further improve them by painting the natural tint.—SQUIB.

### Fumigating against Scales.

I have had for some thirty years past a varied experience in the treatment of scale on plants, and have not, until very lately, discovered a really effectual destroyer. I have found it most difficult, especially at busy times, to keep the trees in a large Camellia house clean. Last autumn I decided to give Messrs. A. Cross and Sons' "Necros" vapourising powder a trial, and for this purpose selected various plants affected with different kinds of scale. After fumigating, I left the plants until morning, when I carefully examined them, and found they were quite uninjured. I then gave them a thorough syringing. In about a month's time I repeated the treatment, this time with the strength of the liquid increased by one-half. After letting another four weeks elapse I decided to give a third application, this being more as a precautionary measure, as my difficulty has always been in entirely destroying the scale. This experiment has since proved quite a success, the plants being now perfectly free from scale and in a healthy condition. I have had equally good results on a larger scale in the Camellia house mentioned above, where, I am pleased to say, there is now not a trace of scale left. Since these experiments I have repotted some Orchids which were in the same house when I made my first trials, and I was very agreeably surprised to find them almost completely free from woodlice. I can only attribute this to the results of the fumigation, as the pots have previously been infested.—W. T. KIRPS, Head Gardener, Walton Lea, near Warrington.

### Perpetual Fruiting Strawberries.

Last year I nearly decided to give up St. Joseph, and grow St. Antoine de Padue alone; but eventually I retained a bed of the former, though I made no fresh plantation of it. This was fortunate, as my St. Josephs have been for a month, and still are, simply one mass of flowers and fruit. They have been the astonishment of all who have seen them, although these same plants were heavily cropped in the summer, having ripe fruits a week sooner than any variety in the neighbourhood. Since the summer, when they bore well, my St. Antoine plants have been a failure, being badly struck with mildew. There has been, and still is, plenty of bloom, but the stem of each truss is affected sooner or later, and the fruits spoiled. I should be glad to know of a cure or prevention for this. Is not Royal Sovereign, one of its seed parents, rather liable to it, the leaves spotting and dying off early in the autumn? This does not matter so much with a summer bearer, but is fatal with a perpetual. I am strongly of opinion that St. Antoine should be crossed back again, into St.



Joseph, or one of the other first cross perpetuals, to gain shorter and more sturdy leaves, to increase the perpetual tendency, and give greater hardiness. I am more than ever convinced that some form of perpetual is the Strawberry of the future, and that the end of those which bear only once a year is certain to come sooner or later; but the perpetuals want high cultivation, care and attention. It is necessary to entirely suppress all runners which are not wanted, so soon as possible; and this at certain times should have almost daily attention. At this time of year some form of wire support for the fruit, to keep it off the ground and exposed to the sun and air, is equally necessary. Wasps, and even bees, were a great nuisance at one time. Strawberries have such a strong scent that they prove very attractive. In the fine weather three weeks ago, St. Joseph simply swarmed with wasps, bees, flies, and hornets, and proved an absolute protection for my outdoor Peaches close by on a wall, which had not any insect marauders.—W. R. RAILLEM.

## Lilies of the World.

(Continued from page 333.)

**AMERICAN LILIES (GENUS LILIUM).**—Of these there are some thirty wild species, and those I describe will be hailed by the amateur gardeners of the Cape Peninsula, especially on the Newlands, Claremont, and Rosebank sides of Table Mountain. They are mostly moisture-loving Lilies, and at the places I have named the conditions that will ensure their successful culture are perfect.

**Canadense flavum** (a beautiful species, with golden-yellow flowers, which are freely spotted purple inside), height 3ft. **Canadense rubrum** (flowers red on the exterior and spotted black in the interior), height 3ft. **Superbum** (if my recollection is correct, old John Parkinson, in his "Garden of Pleasant Flowers," 1629, illustrates and describes *L. superbum* as *L. Martagon imperiale*, and well does it deserve the name. It attains a height of 7ft, and carries from twelve to twenty handsome flowers on a stem. The flowers range in colour from rich orange to crimson, all beautifully spotted.

**Pardalinum** (this species represents some wonderfully beautiful varieties, ranging in height from 4ft to 7ft, and even taller when the conditions are favourable, and producing great heads of lovely flowers). **Pardalinum type** (flowers bright scarlet, shading to rich yellow, freely spotted purple-brown), height 6ft. **Pardalinum Bourgoei** (large, beautiful flowers, bright crimson colour, shading to yellow and spotted maroon), height 6ft. **Pardalinum Michauxi** (flowers crimson-scarlet, shading to yellow, spotted maroon; flowers later than the other species of *L. Pardalinum*), height 5ft. **Parryi** (flowers citron-yellow, spotted chocolate-brown; a magnificent species), height 3ft.

The foregoing species of American Lilies to be seen to fullest advantage should be grown in the moist soil of a *Rhododendron* bed, when the effect of their mass of beautiful flowers is simply wonderful. Planted amongst lumps of sandstone and kept moist, might do as well as amongst *Rhododendrons*.

**Humboldti** (this grand Lily was collected by the great American traveller and plant collector, Mr. Roezl, on the birthday of the great Humboldt, and was named after this world-famed naturalist; flowers large, golden-yellow; of great substance and very showy. A well-grown specimen will give from twenty to thirty beautiful flowers on a stem), height 5ft. This species is found to do best in a moist soil, but not so wet as those above named; still that it does not object to water is proven from the fact told to me by Mr. Roezl that he had to roll up his shirt sleeve to get the bulbs out of the water.

**Parvum** (very distinct and showy; small flowers of bright orange-scarlet colour; freely spotted), height 4ft. Takes the same treatment as *L. Humboldti*. **Bolanderi** (a beautiful species from Oregon, with elegant bell-shaped deep crimson flowers; spotted maroon; moderately moist soil suits it best), height 1½ft. **Columbianum** (the flowers of this species resemble *L. Humboldti*, but much smaller; they are very graceful and fragrant, and of a brilliant orange colour, spotted crimson; same treatment as *L. Humboldti*), height 3ft.

Lilies (genus *Lilium*) from India, Burmah, and Nepaul. Number some seventeen species, all of great beauty, and most likely all would suit South Africa, but I will only

describe three species, as the others have up till now not been a success in Europe. If my friends in South Africa like the sample I ask them to commence with, I can leave time to settle the question of the fourteen other species being tried. **Nepalense** (flowers golden-yellow, tinged inside at base of petals deep purple; handsome funnel-shaped flowers), height 3ft. **Sulphureum** (syn. *Wallichianum superbum*). When in Auckland, New Zealand, 1900, I saw in Mr. Ball's garden this really handsome Lily, and a noble sight it was. Height 5ft to 6ft, with a coronet of seven long white flowers surmounting a sturdy stem. I had a letter recently from Mr. Ball informing me that the Lily this year had fifteen flowers.

At another garden in Auckland I saw the same Lily behaving in a similar manner, and with a considerable progeny of all sizes. The owner expressed a desire to sell some of them, and I undertook to sound the Lily's praises as I travelled this progressive and aggressive wonderful country, "the home of the brave and the free of the Southern Hemisphere." I had a letter of thanks recently from the owner referred to, informing me that he had sold well on to £20 worth of the bulbs of *Lilium sulphureum* to the persons I had recommended it. Now this man a few years previously had brought a bulb for 5s. 6d. So say no more about the gigantic profits of the Cape Town Cold Storage Company. Here is a record-breaker for you in Lilies, and he expects to reap an annual revenue from this original investment of 5s. 6d. He let me into the secret of increasing the bulb, so pardon my not taking you into my confidence, as I promised not to spoil his market by letting others know how he worked his diamond mine.

**Giganteum**, the noblest and most gigantic of Lilies. Some forty years ago I first made the acquaintance of this grand Lily, and it got so impressed on my mind that I can see it as I now write about it. I had paid a visit to the late Sir Morton Peto's fine old garden, near Lowestoft, England, and wandered about with Mr. Bradley, the gardener, who had a trick of keeping visitors in conversation till some surprise he wanted to give came in full view, when we would say, What do you think of that, of this, and the other thing? And so we went along chatting and admiring, till we arrived at the long conservatory, where he threw open the door, and revealed a tropical profusion of foliage drapery, while at the end stood two sentinels reminding one of Gog and Magog at the Mansion House guarding the entrance to the house. "What have you got there, Mr. Bradley?" was my surprised inquiry, pointing to



A fasciated *Lilium auratum*.

(See page 357.)

the sentinels. Waiting till the surprise was over, he replied *Lilium giganteum*.

The next plants were in the gardens of the Hon. and Rev. Boscawen, Cornwall, who had grown this Lily from its introduction, and never was without a supply of flowering plants in his garden. The third successful grower of this majestic Lily I knew was Miss Jekyll, in her beautiful garden at Godalming. She grew it to perfection, and as is the wont of this wonderful lady, who never seemed happy unless all the world participates in what gives her pleasure—the Lily bulb flowers but once, but leaving a numerous progeny—at considerable trouble she not only had *L. giganteum* figured in "The Garden," but showed also in the illustration how it was reproduced, and how easily it could be made an attraction in all gardens. Those who may chance to have "The Garden" bound up will find the illustration some twelve or fifteen years back. Monster bulbs of this Lily are offered for sale; it is well to try such, but those the size of a Pear will be found the most successful. Monster bulbs are apt to go back, back, till they become small before they make a serious attempt to work for a flowering size. Height, 7ft to 10ft, long white funnel-shaped flowers stained purple.—PETER BARR, V.M.H., Cape Town.

(To be concluded.)

## Book Notices.

### Thompson's Gardeners' Assistant.\*

This is the concluding volume of the revised and remodelled edition, there being six in all. It is devoted to remarks on the crops usually grown in the kitchen garden, and is thoroughly abreast of the times. Users of this volume will discover notes on many vegetables and salads that are rarely cultivated in British gardens, yet there is little reason why they should not be. Amongst the lesser known plants on which information is supplied are the Lentil, so largely cultivated near Paris, and which succeeds in warm southern parts of England; the Liquorice, whose fleshy roots provide a sweet, mucilaginous juice, extracted by boiling, and is much esteemed as an emollient in colds. Large quantities are grown at Mitcham, in Surrey, for the use of druggists. Then there are notes on Good King Henry (*Chenopodium Bonus-Henricus*), whose shoots are edible; and the Hop (*Humulus Lupulus*), which is also cultivated in some gardens for its tender shoots, these being substituted for those of Asparagus.

Indian Corn or Maize (*Zea Maize*) we seldom meet with, though a gardener at Sydenham, and known to us, makes a point of growing a considerable quantity each year for use. It is imperative in his case, for his employers are Americans, and insist upon having it. Marigold, too, though seen in the flower borders, is but sparsely employed, and yet the flowers may be gathered when full grown and dried in the shade, to be kept for winter use. In cookery they are used for flavouring soups. The three species of Mint—the Spearmint, Catmint, and Pennyroyal—are defined, and their culture described. Nor is the garden Nasturtium (*Tropæolum majus*) omitted. It is referred to on account of its leaves being eaten as a salad. The Morel, an edible fungus, and the Truffle are both of them figured and described, thus adding to the value and completeness of the work.

Before concluding this review of the lesser known "vegetables" we would refer to Orach, or Mountain Spinach, whose leaves, of course, are used as a substitute for the usual Spinach; also to *Oxalis crenata*, whose little bulbous roots are consumed largely in warmer countries than England. Perhaps these Islands are not favourable enough for its general culture, though the warmer parts would doubtless suit it. The tubers are, however, somewhat acidulous. It is better known as a decorative plant for the greenhouse.

Under Parsley a note is devoted also to the Fool's-Parsley (*Æthusa Cynapium*), which is quite a distinctive genus, but the note sounds a warning in reference to the very poisonous nature of the *Æthusa*. Other plants included are Purslane, Quinoa, Rocambole, Tree Primrose, *Tropæolum tuberosum*, Garlic, Samphire, and Savory.

Coming to the indispensable crops of the kitchen garden, their treatment is very fully dealt with, and various systems are described. The Onion monopolises seven pages, exclusive of one full page plate, and another page illustrating eight forms and varieties. The Welsh, Egyptian, Madeira, Potato, White Spanish, and other sorts are figured and described, while the classified list of Onions exhibited at a Vegetable Conference held

by the Royal Horticultural Society at Chiswick, in September, 1899, is printed in this volume. We note the omission of a very excellent and now proven variety, namely, Dobbie's Golden Ball, which ought surely to have found a place.

The Potato deservedly receives very considerable attention, and Mr. A. W. Sutton's paper on the cultivation and improvement of this esculent is reprinted from the nineteenth volume of the Journal of the Royal Horticultural Society (1896). A figure of sprouted tubers, for planting, is furnished, and the method of attack and growth of the *Phytophthora* or Potato-disease fungus, together with a photograph showing the effects of sprayed and unsprayed Potato plots, are also included. The description of this fungus attack and methods to combat it are described in the text. We notice an error in the fifth line from the bottom of the first column on page 490, where the address of Mr. Robert Fenn is given as "Southampton, Berks," instead of Sulhamstead, Berks.

The names of vegetables are appended in lists by themselves in English, French, and German, and may be useful in certain directions. The calendarial directions for garden operations throughout the twelve months in the fruit and kitchen gardens cannot but be useful, and is excellently drawn up, and the concluding chapter on "Collecting, Storing, and Packing Vegetables," will be received with satisfaction by those in large gardens, or market establishments especially. A well prepared index is furnished, though the numbers of the divisional volumes before that of the number of the pages in place of the Roman figures which represent three separate div.-volumes, would have facilitated the act of reference. Three coloured plates are included in this volume. In all respects the new edition is excellent, and is well within the purchasing means of gardeners, to whom we highly recommend the work.

### European Fungus Flora: Agaricaceæ.\*

A well-bound book of 274 pages (5in by 7) inclusive of an alphabetical index of species. It is a compilation for the specialist, and devoted to the Agarics of all Europe.

Observations extending over a period of twenty years, has led Mr. Massee to the conviction that familiarity with the Fungi and literature pertaining thereto, of one country alone, leads to a false impression as to the significance of the term "species." "It conveys the idea," says the author, "that species are much more sharply defined than proves to be the case, when the entire Fungus Flora of Europe is included. In all large genera common to European countries, the continental species can be sandwiched between British species."

In the work before us, the idea is to give the essential characters of each species as presented by pileus, gills, stem, and spores respectively. For reasons that are given, the species of Britzelmayer are not included.

"In Cooke and Quélet's *Clavis Synoptica Hymenomycetum Europæorum*" (1878), 1,943 species of Agarics are recorded as European, and of these 939 are given as British. The present work includes descriptions of 2,750 European species, of which 1,553 are British, a number considerably in excess of that recorded for the species of any other European country."

### Garden Cities of To-Morrow.†

This book is written to explain the arrangement, the making, the system of revenue and expenditure and general administration of the proposed Garden City—a model city, with abundance of open avenues, boulevards, gardens, and parks; the manufacturing all placed on the outer fringe, the circular railway being confined to that part too, and only a very few buildings in the centre, these being a library, town hall, hospital, theatre, museum, and concert hall. The scheme has gone so far, that a syndicate has already been formed with a considerable subscribed capital to put it into practice. To go into figures would necessitate far too much space, but the book is within the reach of everyone who has the least interest in the subject. However desirable it may be to have garden cities, we are persuaded that they will never exist, or not for long, on the plans laid down in this book. In every great centre of population we find the death-rate decreasing since more perfect sanitary measures have been in vogue during the last twenty or thirty years. Also in every city there is a growing desire for open spaces and wider streets, which desire is largely being gratified to the increasing healthfulness of these towns and their inhabitants. Excessive rents have long ago caused certain manufacturers to remove their places of industry from city to country, and what it costs them in one way is recompensed in another. With speedy electric and motor traction in full realisation, distance is now discounted, and having even the promise of a practicable aerial system of transit, the town and country cannot be longer socially disconnected, but should become more and more interdependent.

\* "European Fungus Flora: Agaricaceæ," by Geo. Massee, V.M.H., F.L.S. London: Duckworth and Co., 3, Henrietta Street, W.C. 1902. Price 6s. net.

† "Garden Cities of To-Morrow," by Ebenezer Howard. London: Swan, Sonnenschein & Co., Ltd, Paternoster Square, 1902. Price 1s. net.

\* "Thompson's Gardeners' Assistant," new edition, edited by William Watson Divisional vol. vi. London: The Gresham Publishing Company, 34, Southampton Street, Strand, 1902. Price 8s.



## Figs under Glass.

### Early Forced Trees in Pots.

Trees intended for affording fruit at the close of April or early in May will now need dressing with an insecticide, paraffin emulsion 8oz to a gallon of water answering, adding  $\frac{1}{2}$ oz of liver of sulphur, and applying it in a tepid state with a brush, being careful not to injure the points of the shoots or rub off the embryo fruits. Very little pruning will be necessary, the trees having been regularly stopped during the season, but if the growths are too crowded and irregular they may be thinned to render the trees symmetrical, but the shoots must not be shortened, or the first-crop Figs will be cut off. The house in which the trees are forced should have the wood and ironwork washed with hot water, whitewashing the walls with hot lime and a handful of flowers of sulphur to a pailful. A mild bottom heat is almost a necessity to a successful swelling and perfecting of the earlier crop, the pots being raised upon loose bricks, pedestal fashion, in the positions they are to occupy in the bed, and the pit filled with Oak or Beech leaves pressed firmly. The depth of the pit needs to be about 3ft, with a mixture of stable litter and leaves, one-third of the first to two-thirds of the latter; for leaves alone the depth should be 4ft to 4½ft.

Care must be taken to avoid overheating, not allowing the temperature about the pots to exceed 65deg until growth takes place. The trees should consist of early and reliable first crop varieties, Early Violet and St. John's being small-fruited and earliest, Brown Turkey and White Marseilles following, and are large fruited, and be started about the middle of November, bringing them forward very gently, keeping the house close and moist by sprinkling twice a day in bright weather, employing fire heat to maintain a temperature of 50deg at night, 55deg by day, and with sun heat 60deg to 65deg. The soil must be brought into a moist condition by needful watering, but not making it sodden.

### Early Forced Planted Out Trees.

The trees should now be untied from the trellis, and the needful pruning effected. Those with the roots restricted to small borders will only require to have the shoots thinned where too crowded, cutting back growths extended to the limits of the trellis and useless for fruit production, so as to allow space for the successional growth. Trees that have not the roots restricted will require cutting back at the upper part of the trellis, allowing room for the extension of the lower fruitful branches, but luxuriant trees should be root-pruned, or the cutting out of growths will only tend to render the trees more unfruitful. The trees should be washed with an insecticide as advised for those in pots, and be secured to the trellis loosely. Cleanse the house thoroughly, remove the loose soil, remains of mulching, point over with a fork, and apply a surface dressing of fresh loam and sprinkle over that 4oz per square yard of a mixture of three parts dissolved bones, two parts nitrate of potash, and one part sulphate of lime, and on that a light mulch of partially decayed manure, lumpy, yet short. Give a good watering, ventilate freely at all times, except when frost prevails, then keep closed, and turn on heat to exclude frost.

### Succession Houses.

The trees are not ripening the wood well in some cases, and it would be wise to turn on the heat in the morning, and admit air only to induce a circulation, throwing the ventilators open at night, the heat having been turned off at midday. This will assist the maturation of the foliage, but any unfruitful trees must be root-pruned and the roots restricted to moderate sized borders, and are then more manageable and fruitful with the roots confined to limited space than when having an unlimited rooting area. Prune the trees when the leaves have fallen, cleanse the house, put everything in order. Dress the trees, especially those that have been infested with insects, with an insecticide, it always being good policy to do this as preventive of attack. Keep the house cool and dry, yet exclude severe frosts.

### Late Houses.

Excessively luxuriant trees should be lifted and root-pruned, as advised above. Trees in unheated houses ought to be given free ventilation, and when the leaves fall wash the trellis well. Have the branches tied together in convenient bundles and made safe from frost with some straw or fern over them, encasing the bundles in mats. In heated houses this is not necessary, but the trees in these must not be exposed to severe frosts or they are liable to be injured, therefore a little warmth will be necessary in severe weather. Trees in cool houses should have the roots, especially at the collar, protected by a covering of dry material.—GROWER.

## Societies.

### R.H.S., Scientific Committee, Oct. 7th.

Present: Dr. Russell (in the chair); Messrs. Worsdell, Saunders, Worsley, Odell, Hooper, Drs. Cooke and Rendle, Professor Boulger, Revs. W. Wilks and G. Henslow (Hon. Sec.).

*Crotalaria Species*.—Mr. Wilks exhibited a flowering branch of a species raised from seed received from Uganda. It closely resembled *C. Cunninghamii*, from the neighbourhood of the Gulf of Carpentaria in Australia. Dr. Rendle undertook to examine it for identification.

*Effects of Hail in Kent*.—Mr. Wilks also showed stems of trees of which the bark had been ripped open in considerable lengths by the hail of the late storm. The wood was exposed as the bark curled backwards. It was received from Mr. Woodward, of Teston, Kent. It was recorded that six tons of hail was found in the basement of a house after the storm.

*Fir and Cryptococcus*.—Mr. F. Lloyd, High Sheriff of Buckinghamshire, sent a bough infested by this insect. The tree had died after four years' attack. Mr. Saunders undertook to examine and report upon it.

*Mushrooms and Mites*.—Mr. Gaut, of Leeds, sent some specimens badly attacked by mites, which, with their eggs, were very observable. They are said to be wholly destroying the crop. Mr. Saunders examined them, and reports as follows: "The Mushrooms are badly attacked by one of the 'bulb mites,' *Rhizoglyphus echinopus*. I do not see what can be done to destroy them but to clear out the whole of the Mushrooms and the top soil of the bed and begin afresh. Any method of killing the mites would certainly destroy the Mushrooms; soaking the upper part of the bed with boiling water would kill the mites, but it would equally kill the Mushrooms, and most probably the spawn. Before making a new bed I should wash down the walls or woodwork that had in any way come in contact with the bed with paraffin emulsion or paraffin mixed with water, one part of the oil to twenty of water, or with boiling water."

*Vine Leaves Burnt*.—Leaves of Madresfield Court Vine were received from Mrs. J. B. Wood, Henley Hall, Ludlow. No fungus could be detected. It was suggested that the appearance was probably due to the effects of the sun through the glass on the leaves when they were wet.

*Begonia Leaves Diseased*.—Leaves were received from Mr. C. Newington, of Oakover, Ticehurst, Sussex. An examination by Mr. Saunders revealed no insect pest; but Dr. Cooke remarked that the peculiarity of the disease occurring along the ribs and veins was very suggestive of *Gloeosporium*, so that it might be an incipient stage of that fungus; such being the feature of this disease of leaves of the Plane tree.

*Chlorosis on Palms*.—Mr. Odell exhibited seedlings of *Kentia*, showing the yellow, unhealthy leaves, taken from a batch of some thousands of seedlings, of which only a very small proportion were affected. A plant of *Kentia* submitted to the committee in February last (with five others) were in same state as seedlings shown, but when grown in a cool house with little shade, and potted in soil containing a trace of iron, the leaves developed the ordinary colour. Mr. Odell added that *Kentias* and *Seaforthias* (*Archontophoenix*) seem more subject to chlorosis than such genera as *Cocos* and *Rhapis*.

*Germination in Amaryllids*.—Mr. Worsley read a paper on this subject, which will appear in full in the Journal of the Society with illustrations. The author observes: "That it is possible for two embryos to exist in one seed of *Hymenocallis concinna* (Baker, sp. nov.). I believe it to be unique in the literature of these plants. The minute threads by means of which the ovules adhere to the base of the style (placenta) and constitute the only direct communication with the stigma, would seem to be so arranged that the whole of the ovules would become impregnated contemporaneously, and probably instantaneously, on the adhesion of a sufficient number of virile pollen grains to the stigma." Of these *Amaryllids*, with bulbiform seeds, he observes: "Such plants have a fixed number of ovules (six) and a fixed number of seeds (subject to very small fluctuation), yet there is often a great dissimilarity between the number of seeds and of ovules." In the above plant the number is four. "I believe that we must seek in the structure of the tissues below the ovary the cause of such limitations. It would seem as though the carriage of nutriment to the embryo from the bulb of the parent was either limited by the nature of such tissues to a certain number of channels, or that all the nutriment became, after impregnation, quickly diverted to the strongest embryos, and that the rest suffered from strangulation or starvation." He then refers to the great variety of sizes, the unequal vigour and vitality in the seeds. After alluding to the difficulty, if not impossibility, of "diverse impregnation" in support of his theory of simultaneous impregnation of all the ovules, Mr. Worsley proceeds: "From this it would appear as though a single pollen grain were capable of impregnating over 100 ovules, such as exist in the ovary of *Hippeastrum*; yet I do not think we are justified in asserting this to be an ascertained fact."

He then alludes to the well known fact of different degrees of impregnation of the ovules when hybridising plants is performed, and adds: "These experiments tend to suggest that, beyond the one act of excitation, or instantaneous impregnation, there remains some further function for the male germs to perform, which is improperly or only partially done by foreign pollen grains." In the case of *Hymenocallis concinna*: "The original process issuing from the seed is duplicated, and each process is terminated by a bulb in process of formation." This he refers to two embryos having been formed within the embryo sac, and suggests that one pollen grain may contain more than one fertilising sperm-cell, and so impregnate many ovules. The author then refers to the curvature of the "process" as it issues from the embryo, of which he says its principal function is not that of a root.

**Abnormal Onion.**—Mr. Healey, of Hampton, Middlesex, sent a very curious formation. The Onion was well formed below, and bore a green stem of some 6in in length, but terminated by another Onion, also well formed. It was thought that it replaced the flowering bud, this having been broken off, but an examination by section showed that such was not the case; so that it arose from the replacement of the flower bud by a true bulb. Mr. Healey adds: "The sheath around the Onion below, over the second bulb, and right to the top, was continuous; and when pulled up the sheath was not even broken."

**Physianthus Catching Moths.**—Mr. Henslow showed flowers of this American Asclepiad, often cultivated at Cape Town, nearly every flower of which had caught a small grey moth by its proboscis, being nipped between the anthers. They either died of starvation, or, as was frequently the case, were carried off by bats.

### Birmingham Gardeners.

The opening meeting of the autumn session of this association was held recently, when the president (Professor W. Hillhouse, of Birmingham University) gave an instructive and interesting verbal lecture on "The Theory of Root-Pruning," which was illustrated with a series of diagrams relative to the structure of the roots of trees and their assimilation of water and other liquid nutriment. Prizes had been offered for collections of Grasses correctly named, for which, however, there were no exhibits. At the next meeting, October 20th, the subject will be "The Evolution and Improvement of Fruit," by Mr. Lewis Castle, superintendent of the Duke of Bedford's experimental fruit farm, Ridgmont, Bedford.

### Woolton Gardeners.

Mr. R. Todd, of the Woolton Wood Gardens, occupied the chair at the first meeting held in the Mechanics Institute, when an excellent lecture on the barometer was given by Mr. W. S. Patey, a frequent attender at their meetings, and a gentleman who stood high in the recent examination of the R.H.S. A feature of the meeting was the large number of teachers who were present at the invitation of the committee, the lecturer experimenting and showing diagrams which proved most interesting. Mr. T. Carling and Miss Hindle proposed and seconded the vote of thanks, Mr. W. W. Gamble and Mr. R. G. Waterman supporting the vote. Miss Wright, on behalf of the teachers, thanked Mr. Patey and the committee for their kindness.—R. P. R.

### Bristol Gardeners.

The opening meeting of this association was held at St. John's Rooms, Redland, on Thursday, October 9, under the chairmanship of Mr. E. Binfield, Old Sneed Park. On this occasion Mr. Brooks, of Messrs. Garaway's Nursery, Clifton, gave an interesting lecture on the great fruit show of the Royal Horticultural Society, held at the Crystal Palace, London. He dealt with the numerous exhibits of former years, and compared with those of the present season, showing the effects such a summer we have just experienced must have on the fruit supply of the British Isles. He emphasised the fact that gardeners would find it an excellent object lesson to visit these shows at intervals, thereby gaining a knowledge of fruit grown in the different counties and under different conditions. He argued that gentlemen would find it to their advantage to send their gardeners to inspect the exhibits at this, the finest fruit show of the British Isles, where they would see the best quality, and return home with an ambition to grow fruit equal to that seen at the show. Comparing the fruit of this to the fruit of last season the lecturer remarked on the absence of many of our leading exhibitors, which proved how disastrous our sunless summer had been on our fruit crops, and where 4,000 dishes of fruit had been shown in former years only 1,000 were on the tables this. Mr. Brooks also gave some very useful information as to the packing of fruit, and mentioned the mode adopted by leading exhibitors. A good discussion followed Mr. Brooks' lecture, and he was cordially thanked. The prizes for the evening were for two bunches each of black and white Grapes. For black the first went to Mr. N. C. Dobson (gardener, Mr. Thoday); Mr. Francis Taggart, F.L.S. (gardener, Mr. Binfield),



A Pot-grown Banana. (See page 357.)

securing first for Muscat of Alexandria; while Mr. W. A. F. Powell (gardener, Mr. Raikes) was here an excellent second with Golden Champion. Lady Cave (gardener, Mr. Poole, F.R.H.S.), obtained a Certificate of Merit for a collection of ornamental Gourds. The judges also awarded a certificate to Mr. J. M. Kitley, Littleover, Derby, for three bunches black Grapes, notwithstanding they were very much spoilt in transit.—H. K.

### Cardiff Gardeners.

The opening meeting of the association took place at the Grand Hotel on Tuesday, October 7, Mr. F. G. Treseder presiding over a very large attendance of members. Mr. J. Basham, jun., fruit grower, Bassaleg, Mon., gave an interesting lecture on "Fruit Culture, Past and Present." By way of enhancing the lecture, several dishes of very fine examples of culinary and dessert Apples and Pears were staged. The lecture was one full of interest, dealing with Apple culture from the twelfth century to the present time, giving full details regarding the best methods to adopt to ensure successful results. The debate was of an appreciative character. A first-class certificate and a special vote of thanks was awarded Mr. Basham for his collection of thirty-five dishes of fruit. Competitive Classes:—Class 1, for best dish of culinary Apples, and ditto dessert (five fruits to form a dish). Mr. P. Malpass won with good fruit of Warner's King and Cox's Orange Pippin; Mr. Curtis second, and Mr. Murton third. Class 2, for the best dish of dessert Pears (five fruits to form a dish). Mr. P. Malpass first with good Williams' Bon Chrétien, and Mr. Collier second with Pitmaston Duchess. Several competed in both classes. Messrs. Basham and Son were the adjudicators.—J. JULIAN.

### Croydon Horticultural.

A meeting was held in the society's room at the Sunflower Temperance Hotel, George Street, on Tuesday, October 7. By the kindness of the Croydon Public Libraries Committee and Mr. Jast, the chief librarian, a complete list of the magnificent volumes of the "Reichenbachia," a grand work on Orchids, and four volumes on "Choice Ferns," recently added to the library, were exhibited upon the tables. The chairman, Mr. W. J. Simpson, having called attention to the exhibits, introduced Mr. T. Neve, the Gardens, Lindesham House, Wokingham, who gave a practical lecture upon the "Renovation of Old Fruit Trees." In his introductory remarks the lecturer specially mentioned the value and importance of fruit as food, and the dietetic properties of Apples in particular. The lecture was illustrated by photographs of the trees mentioned, and by some excellent fruit gathered from them. Mr. Neve's lecture was much appreciated by all present. Several questions were put to the lecturer and ably answered, and a unanimous vote of thanks was accorded him. To the Libraries Committee a similar vote was also given. The subject for October 21 will be "How to Make an Alpine Garden" (from personal experience in the Alps and elsewhere), illustrated by diagrams, photographs, &c.



### Newport (Mon.) Gardeners.

The members of the above association held the first meeting of the session on Wednesday, October 8, when Mr. J. J. Graham, of the Cardiff Gardeners' Association, read a paper on "The Chrysanthemum." Mr. Graham is the holder of the challenge cup of the Newport Chrysanthemum Society, and his paper was looked forward to with great interest. There was a very good attendance, presided over by Mr. F. S. Daniels. Mr. Graham gave a very instructive account of the manner in which he treats his plants, commencing with the striking of the cuttings, potting on the plants, the soil, and the watering, which he considered of the utmost importance, being very careful not to overdo them with stimulants, and not to coddle the plants at any time. He then proceeded to give directions as to stopping the plants, timing and taking the buds, destruction of pests, housing, air giving, shading, &c., finishing his paper by remarking that all the trouble, care, and anxiety were forgotten in the glorious display made by the Queen of Autumn. A discussion followed, and many questions were asked by Messrs. Kenward, Daniels, Duff, Whitrow, Morgan, Pegler, Sharratt, Wiggins, and Neades. A splendid collection of upwards of thirty varieties of Apples and Pears were placed on the tables by that noted Monmouthshire fruit-grower and exhibitor, Mr. J. Basham, of Bassaleg, for which a certificate of merit was awarded. A Croton by Mr. Sharratt, and a Eucharis, by Mr. Lewis, were also shown.—J. P.

### Devon and Exeter Gardeners.

The annual meeting of the Devon and Exeter Gardeners' Association was held at the Guildhall on the 9th inst., under the chairmanship of the Mayor (Mr. A. E. Dunn). Those present were Messrs. W. B. Baker, Wm. Cobley, D. Betts, M. R. Court, J. Rogers, Wm. Charley, Wm. Andrews, E. Cole, W. Brewer, J. Hutchings, F. T. Baker, T. Cork, J. Isaac, T. Woodridge, E. Phillips, Wm. B. Chapbell, E. W. Miln, J. G. Anning, J. P. Rippon, C. Perkins, J. Langdon, R. Cripps, H. J. Baker, R. Mills, Andrew Hope (hon. secretary), and W. Mackay (treasurer). The hon. secretary read the committee's report, of which the following is a summary:—

Though the past year—the eleventh in the history of the association—has been of an uneventful character, it, nevertheless, has been one of steady progress and furtherance of the aims with which our work began. A noticeable feature in the meetings of the last session was the presence of young members as well as of many of the founders of the association, and the outspoken and friendly criticism upon the arguments and theories and methods advocated by those who prepared the papers read. By this means, undoubtedly, much practical benefit was bestowed, and the real interests of the society maintained and advanced. The practical side has never been overlooked or forgotten in the discussions. The continued kindness of His Worship the Mayor of Exeter in granting the use of so comfortable a room in the Guildhall for our meetings has been a great help, being so centrally situated, and has relieved the society from certain expenses or private obligations for accommodation which otherwise would have been incurred. A feature of our arrangements, introduced in the spring of 1901, was continued for the last two sessions, and added much to the interest and usefulness of the work done. That was the presenting of a nominal first, second, and third prize at each meeting for the best offered in competition by the members of such products as Beet, Leeks, Brussels Sprouts, table plants, Chrysanthemums, &c. These private competitions proved of great value as object lessons in teaching young gardeners what to aim at and what to avoid in specimens for the exhibition table. The committee, believing that much useful instruction was by this means indirectly conveyed to the members, have resolved to continue the scheme. As the voting is by ballot of the members present, an unbiassed and fair judgment is in every case given. Although the balance in the treasurer's hands is ample for all ordinary requirements, the amount has been reduced by the death of several kind friends of our association, such as Mr. Lethbridge, Mr. T. Snow, Mr. R. B. West, Mr. H. D. Thomas, and others, who were constant subscribers to our funds. If the state of our funds had warranted our doing so, the committee would have proposed to offer prizes to young gardeners for the best essay on some specific gardening subject, the award to be made by the committee. With gratitude and much pleasure the committee record the consent given by our very good friend Mr. E. A. Sanders to be again nominated as president of the association. Our thanks are also due to the local and horticultural Press for the excellent reports they have given of our proceedings. A series of papers for the autumn session is now being arranged, and it is hoped that they will prove no less interesting and instructive than those which have preceded them. Passing

reference may be made to the very pleasant summer outings held by the members in July last. By the kindness of Mr. T. B. Bolitho and Mr. R. F. Watkins, the charming seats of these gentlemen on the Dart were visited, and the rare trees and shrubs for which they are famous, inspected. A balance in hand was reported of £6 1s. 6d.

The Mayor, in proposing the adoption of the reports, thought they were, on the whole, very satisfactory. He was sure that every one of those members who had taken the trouble to attend the meetings regularly must have benefited by the different lectures. He thought their association was deserving of the greatest possible assistance.

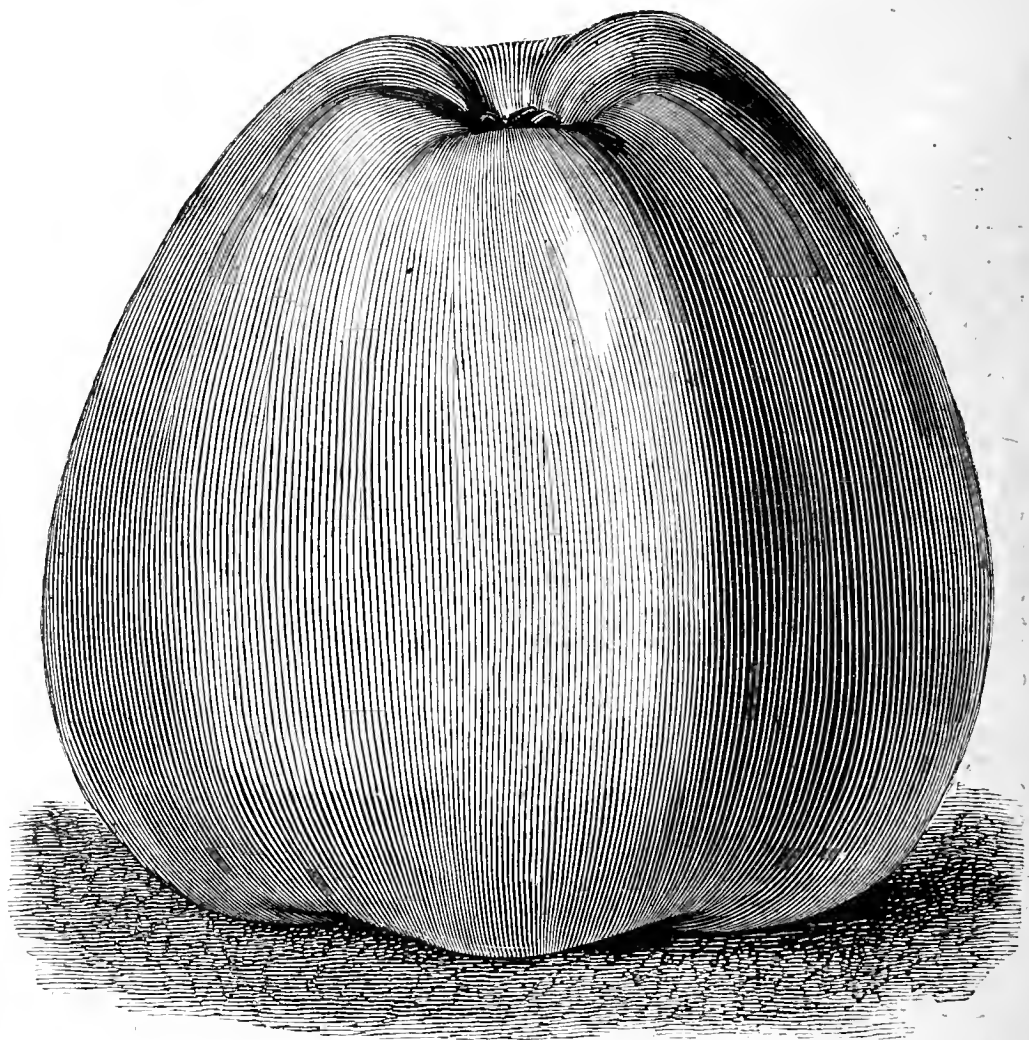
Mr. R. Mills seconded, and the reports were unanimously adopted. Mr. A. Hope moved that Mr. E. A. Sanders be re-elected president. He was sure that if he had the whole of Exeter for a field to choose from, he could not find one more in touch with the association and with gardening.

Mr. W. Mackay, in seconding, said that during the time their association had been established they had had many presidents, but none who had done more good for the association than Mr. Sanders.

The re-election was unanimous, as was the re-election of the vice-presidents, viz.:—His Worship the Mayor of Exeter, the Sheriff, Major Tracey, Messrs. W. B. Heberden, C.B., C. T. K. Roberts, P. C. M. Veitch, R. G. Abraham, H. N. Imbert Terry, and G. D. Cann. Messrs. A. Hope and W. Mackay were re-elected secretary and treasurer respectively, and the committee were re-elected. A vote of thanks to the Mayor for the use of the Guildhall, and for his kindness in presiding, was heartily accorded on the motion of Mr. Andrew Hope.

### Beckenham Horticultural.

On Friday, October 10, the first lecture of the season, "The Watering of Plants," was delivered by Professor Percival, M.A., F.L.S., to an appreciative assembly; Dr. Randall, the chairman of the U.D.C., presiding. The lecturer referred to the mechanical action of watering, and counselled giving more care and thought than is usual. By the aid of diagrams, the root system was fully explained, the way in which water enters the plant by its root hairs, carrying with it nutriment, and was traced by the lecturer through the plant to the leaf, and the changes that take place there described. As a matter of fact, there are many side issues arising out of the watering question, much of this the lecturer dealt with in a most interesting and instructive manner, and at the close a most hearty vote of thanks was accorded to him. Mr. Price, of Broadclyst Gardens, had on view a collection of kitchen and dessert Apples, for which he was worthily awarded the society's certificate of merit.—T. C.



Apple, Lord Derby.

## APPLE, LORD DERBY.

One of the best culinary Apples, and largely grown, in use till Christmas, from the end of October. The fruits are large (as shown in our illustration) of excellent quality, and golden coloured when perfected; indeed, it is then a fruit fit for dessert. The trees bear well annually, and thus Lord Derby is much cultivated by marketmen. The habit of growth is upright. It is one of the best dozen Apples, and may be commended for general planting.

## Notes on Carnations.

The love for Carnations is ever increasing, and they seem destined to occupy as large a share of attention from the public generally as Chrysanthemums have for many years. A good deal of diversity of opinion exists as to whether autumn or spring planting is the better. My own experience has always been that one has to be guided by circumstances. In the South, West, and Midlands (except in cold districts) planting early in October answers admirably if the plants are well rooted, but when the layers are weak and not very well rooted, it is better to leave them undisturbed till March. Again, where the soil is very stiff, spring planting is preferable, so that after adding manure and burnt refuse in October, the soil may be thrown up roughly to become aerated during the winter.

In preparing the ground at the present time soils of light and medium texture should be dug deeply, and have a moderate dressing of well-decayed manure incorporated with them. If cow manure is used it should have lain in a heap for at least six months, and have been turned a few times. After the surface has dried, apply a heavy dressing of soot, fork it in, mixing it as thoroughly as possible with the soil. The heavy soil should be thrown up roughly, and if possible have plenty of burnt refuse, with a little lime scattered on the surface.

When collections are grown in the open I like to form beds, each having five rows, these to be 18in apart, the plants being set 1ft asunder. Then, with 2ft alleys between the beds, there is plenty of room to attend to cultural operations throughout the year. Plant carefully, sinking the stems up to the lower leaves, so that when the soil is pressed firmly around the stem each plant will be held securely in position. When this is completed run the hoe over the surface of the beds. Throughout the autumn and winter keep a sharp look-out for slugs. If they are found to be damaging the plants, catch as many as possible, and dress the bed frequently with air-slaked lime.

In spring, birds often do much damage by eating the leaves, and unless measures are taken to stop them they quickly ruin hosts of plants. Webbing the bed thickly with black cotton and hanging a few cheap mirrors (which may be bought for a few pence) from strong stakes by means of string, are effectual ways of scaring the feathered tribe.

The following varieties all produce large, handsome flowers, and have a robust habit of growth: Aline Newman, deep red; Artemus, scarlet; flaked and streaked lavender; Boadicea, rosy scarlet; Bomba, salmon pink; Brodick, yellow, flaked and marked with red; Dervish, yellow, margined lilac rose; Duc d'Orleans, yellow and buff, very large; Garville Gem, heliotrope; H. Falkland, yellow, edged with bright rose; La Villette, pink and yellow; Mephisto, a grand crimson; Mrs. Eric Hambro, white; Mrs. J. Douglas, rose; Mr. Nigel, yellow-crimson edge; Queen of Scots, rose-pink; Silver Strand, a grand white; The Hunter, an improved Mrs. Reynolds Hole; Voltaire, yellow ground, edged and marked with rose; Sir Waldie Griffiths, crimson; and Waterwitch, blush-white.—DEVOTEE.

## Trade Catalogues Received.

Frank Cant & Co., Braiswick Rose Gardens, Colchester.—*Roses.*

J. Cheal and Sons, Lowfield Nurseries, Crawley, Sussex.—*Trees and Shrubs, Fruits, Roses, &c.*

E. P. Dixon & Sons, The Nurseries, Hull.—*Fruit Trees, Roses, &c.*

F. C. Heinemann, Erfurt, Germany.—*Special Trade Offer of Novelties.*

Thomas Rivers and Son, Sawbridgeworth, Herts.—*Fruit, Trees, Roses, &c.*

Will Tayler, Osborn Nursery, Hampton, Middlesex.—*1, Select Fruits; 2, Roses.*

D. S. Thomson & Sons, The Nurseries, Wimbledon.—*Roses, Fruit Trees, Shrubs, Plants.*



## Hardy Fruit Garden.

**PEACHES AND NECTARINES.**—Give all possible assistance to trees ripening their fruit. The clearance of any superfluous shoots permits access of light, while leaves obstructing sunshine and shading the fruits may be drawn on one side or cut in two. Hang nets in front of the trees to prevent injury to the fruit from birds. The nets may be tied under each fruit so as to form small pockets, which will catch the fruits should they prematurely fall. To obtain the highest flavour and quality in good fruit gather them before being quite ripe, and finish in the fruit room. When the trees have been cleared of fruit a re-arrangement of growths may be made, as the old bearing growths can be cut out, and possibly some rather weak or semi-exhausted branches may need removal. After the principal branches have been regulated the current year's young shoots may be laid in between them. Should red spider be present at all, previously give the trees a thorough cleansing with the garden engine, though if the attack is unusually bad an insecticide is necessary. The true cause, however, of such severe attacks of this pest will be found to be a dry border. Hence, give a thorough soaking with clear water. Afterwards a little weak liquid manure should prove beneficial.

**MORELLO CHERRIES.**—The crops, even from late reserved trees, will now be gathered. It is, therefore, desirable to examine specimens on walls or trellises in order to discard any exhausted or worn out growths, and to remove the old bearing shoots, relaying the current season's growths by which they may become thoroughly well ripened. Young trees which have had a certain amount of freedom of growth must now have it regulated and equalised, so as to produce a well balanced specimen. Any trees growing too luxuriantly ought to have a gentle check by judicious root-pruning or lifting and replanting. Red spider frequently attacks Cherries on walls. Should there be any present on the foliage it is desirable to destroy it. Vigorous syringing, either with or without insecticide, effects this. The chief cause of insect attacks of this character is dryness at the roots. To avoid trees suffering from their destructive influences keep the border moist, roots plentiful and fibrous, affording a mulching in summer to encourage surface rooting and prevent rapid evaporation.

**OUTDOOR FIGS.**—Lay in strong healthy growths at regular distances apart, or so as to furnish the trees equally. Small and useless spray may be cleared out entirely. Well ripened growths are the most productive in fruiting.

**OUTDOOR PEACH AND NECTARINE TREES.**—The whole of the growths which have borne the present season's crop may be cut out, their place being taken by the reserved growths of the current season. These, if too numerous, may be thinned, for it is useless to retain a number of growths for which, however suitable they may be for bearing, no room can be found without unduly crowding. Exhausted growths or branches, too, may be removed; in fact, nearly the whole of the pruning may be carried out, though no shortening of young wood should be effected now. After this, the trees will probably need re-arranging, for which purpose it may be essential to loosen them entirely from the wall or trellis, so as to better distribute the branches. The main object now, is not so much to make the trees perfect examples of training, as to ripen the wood thoroughly, and to this end the autumn pruning must be mainly directed, leaving the final training until spring, when a little more pruning will be essential. The soil about the roots also must be examined, giving a copious soaking where the roots are found to be ramifying in very dry material. It is not too late to lift and replant any trees which are found to be growing too strongly, and which are, or likely to be, fruitless in consequence. Of course, young and portable trees can only be dealt with. In common with other wall trees, Peach and Nectarine trees may also be planted. Prepare the soil by liberally digging. Rather than add manure, introduce some fresh soil, which should be of a calcareous character. Soils deficient in lime should be improved by its addition, also wood ashes. The dwarf fan-trained are the best for ordinary sized walls. Plant firmly, but only loosely secure the branches to the wall or trellis, so as to permit of the soil and the trees settling down together.

**GENERAL HINTS ON FRUIT TREE PLANTING.**—The season has practically arrived when a commencement may be made in the important work of planting fruit trees and bushes. Although the leaves may not yet have all fallen, they are in such an advanced stage of ripeness that their presence need be no drawback to planting Gooseberries or Currants during the present month; also stone fruit trees desired to be established against walls or trellises. The planting of small bush fruit generally admits of the ground being liberally treated in the matter of digging and



manuring, but for stone fruits, also Apples and Pears, the soil must be well broken up and pulverised without manure as a rule. The order for fruit trees and bushes should be placed with good and reliable nurserymen, who make a speciality of supplying the best varieties true to name. The bulk of the varieties chosen should be such as do well in the neighbourhood, including some which are promising in every way, but not usually grown in the district. On receiving fruit trees from the nurserymen, it is very important that they be carefully unpacked, and laid in the soil at once, so as to preserve the roots from drying until proper planting can be carried out. Prior to planting, the roots must be carefully examined. Any of those injured must be cut back to healthy parts. In planting, spread out the roots in wide and shallow holes. Cover them with a good mixture of fine soil worked firmly about them. Stake standard trees immediately, and mulch round the roots of all with flaky manure.

**AUTUMN FEEDING OF THE TREES.**—Much may be done to improve fruit trees which are in a fruitless condition owing to impoverishment of the soil from a deficiency of food and moisture. Such trees make but small quantities of new wood annually, and the fruit buds suffer from their lack of energy. Wall trees often experience these conditions from various causes. Their position is naturally drier, and the soil more freely drained. The borders containing the roots are frequently cropped with vegetables and other crops, which abstract both food and moisture. Clear away surface crops and weeds, at the same time loosening the soil. Follow by applying a copious soaking of water, enough to moisten the soil to the lowest roots. Having thus secured moisture in the soil, a similar application of strong liquid manure may be given, so as to reach the whole mass of roots. The roots of wall trees will extend at various distances from the front, but the chief or fibrous roots ramify within a few feet. Old established standard trees, with large spreading heads, will have roots extending the same distance in the soil. The moistening and feeding must reach the extremities of these to effect good results. Trees on grass are moistened by making holes with a crowbar over the rooting area at short distances apart. These holes may be repeatedly filled with water and liquid manure, until the soil is sufficiently moistened and fertilised.

### Fruit Forcing.

**VINES: EARLIEST FORCED IN POTS.**—To produce ripe fruits in late April or early in May the Vines are best grown in pots, as stated in a former calendar, selecting early sorts, such as White Frontignan, Buckland Sweetwater, and Foster's Seedling in white Grapes, and in black Royal Ascot, Black Hamburgh, and Madresfield Court. They should now be placed in position preparatory to starting them early in next month.

**EARLIEST FORCED HOUSE.**—Where late Grapes are not cultivated extensively to maintain a supply to May, or thin-skinned Grapes are required by April, preparations must be made for early forcing. The Vines having been pruned in September, the loose bark stripped off, the house may be cleaned, the border top-dressed, and the Vines treated with a solution of paraffin emulsion, 8oz to a gallon of hot soft water, adding  $\frac{1}{2}$ oz sulphide of potassium or liver of sulphur, thus combining an insecticide with a fungicide, effective against Vine pests, mildew, and other fungoid affections, red spider, thrips, scale, and mealy bug. To have Grapes ripe in April the house must be started next month, as under favourable conditions five months are required to produce ripe Grapes of even the early varieties during the duller period of the year. It can be done in much less time on the express forcing system, but the strain on the Vines is so great that they are little good afterwards.

**MIDSEASON HOUSES.**—When the leaves are all down the Vines should be pruned, any Grapes remaining be cut with enough stem for inserting in bottles of water and placing in a cool, rather dry room, where they will keep better than on the Vines. This will allow of the house being thoroughly cleaned, also the Vines, upon which much of success or otherwise depends in the coming season. It is better to do this than to leave the house and Vines in a dirty condition until a convenient time, which usually is badly performed later from the press of other matters, and the pests have time to hibernate in retreats where they cannot be reached by insecticides. Where Grapes are hanging air will need to be admitted on all favourable occasions, and a gentle warmth be maintained in the hot-water pipes, so as to promote a circulation of air in dull, damp weather and prevent the deposition of moisture upon the berries. Bad leaves must be removed, and the Grapes seen to occasionally for the removal of decayed berries.

**LATE GRAPES.**—There is little difficulty in keeping such thick-skinned Grapes as Alicante, West's St. Peter's, Gros Guillaume, Gros Colman, Mrs. Pince, Alnwick Seedling, and Lady Downe's, provided the roof be waterproof, drip avoided, and moisture prevented from deposition on the berries, which can be done by judicious ventilation and gentle warmth in the hot-water pipes. White Grapes, however, except Calabrian Raisin, which has a tough skin, do not keep nearly so well, both Syrian and Trebbiano being in a degree only less liable to spot than Muscat of Alexandria, which, when finished so as to hang in good condi-

tion till January, is supreme among Grapes. Its great enemy is spot, and that of two kinds—one caused by moisture on the berries, and the other by a fungus, which cannot attack the berries successfully until their epidermises are suffused with moisture in a stagnant state—that is, resting (though imperceptible) on them. The means, therefore, of avoiding both is to prevent the atmosphere becoming stagnant, a temperature of about 50deg being necessary, and air must be given early on fine mornings, with warmth in the hot-water pipes to expel moisture and allow of the berries being warmed equally with the surrounding air, moisture being kept from condensing on the berries. There must not be anything like a leak in the roof, no mouldy leaves or decayed berries, and moisture kept down as much as possible, that likely to arise from the border being prevented by covering it with dry material, than which nothing answers better than roughly cut, clean, sweet, and dry Wheat straw.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.             | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|-------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|                   |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                   |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.<br>October. |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ... 5      | E.N.E.             | deg. 47.9               | deg. 45.4 | deg. 57.5 | deg. 45.7 | Ins. —      | deg. 51.0                             | deg. 53.8      | deg. 55.5      | deg. 43.0                    |
| Monday ... 6      | E.S.E.             | 48.1                    | 47.6      | 52.1      | 46.5      | —           | 51.2                                  | 53.6           | 55.2           | 43.0                         |
| Tuesday ... 7     | W.N.W.             | 51.7                    | 49.8      | 56.5      | 44.0      | —           | 51.5                                  | 53.4           | 55.1           | 42.5                         |
| Wed'sday ... 8    | S.E.               | 44.4                    | 43.5      | 57.1      | 39.5      | —           | 52.0                                  | 53.5           | 55.0           | 28.3                         |
| Thursday ... 9    | E.S.E.             | 54.9                    | 51.4      | 61.2      | 42.8      | 0.36        | 51.3                                  | 53.2           | 54.8           | 34.0                         |
| Friday ... 10     | S.W.               | 60.0                    | 56.8      | 65.2      | 51.8      | 0.15        | 52.3                                  | 53.2           | 54.6           | 47.0                         |
| Saturday 11       | S.E.               | 55.9                    | 55.2      | 61.2      | 53.2      | 0.02        | 53.8                                  | 53.7           | 54.5           | 40.0                         |
| MEANS ...         |                    | 51.8                    | 50.0      | 58.7      | 46.2      | Total. 0.53 | 51.9                                  | 53.5           | 55.0           | 39.7                         |

The first part of the week was dull and dry, the latter part brighter, but more unsettled, with rain on three days.

### Publications Received.

"Journal of the Department of Agriculture of Victoria," August, 1902. Part 8 of vol. 1. Chief contents: Phylloxera-Resisting Stocks, Poultry and Their Diseases, Fruit Preservation, Vegetation Diseases Act, Rust in Wheat, and Black Spot of Apple. \* \* "Le Jardin," September 20. Contains: Culture of Saintpaulia ionantha, Terrestrial Orchids, A New Transplanting Machine (Illustrated), &c. \* \* "An Afrikaner's Appeal to Afrikaners to Assist in Bringing About Peace in South Africa," by H. W. Fourie, jun.; Cape Town: Office of "De Kolonist," Brie Street. (Sent by Peter Barr.) \* \* "Garten Flora," September 15. \* \* "The Canadian Horticulturist," September, 1902. Special features: Bradshaw Plum, Plum Growing in Ontario, Popularising Public Parks, Burlington Fruit Station, The Yellow Day-Lily. \* \* "Men of the Moment," No. 5, the Right Hon. A. J. Balfour; Treherne's Penny Series. \* \* "Le Moniteur d'Horticulture," September 10, contains a coloured plate of hardy Philoxes (six varieties). \* \* "The Western New York Horticultural Society." \* \* "Meehan's Monthly," September, containing an elegant coloured plate of Monotropa uniflora. \* \* "Third Annual Report on the Soils of Dorset," issued by the University College, Reading, August 1902, price one shilling. \* \* "Le Jardin," September 5, coloured plate of three Gentians and three Primulas. \* \* "Cassell's Dictionary of Gardening," part 17, price 7d. net, contains a coloured plate of Sutton's Blue Primula, and many beautiful illustrations. The part ends at Siegesbeckia. \* \* Autumn syllabus of Swanley Horticultural College; also syllabus of work done in summer 1901. \* \* "Miniature Rifle Clubs, and How to Form and Conduct Them," by H. Marks; London: 17, Victoria Street, S.W. \* \* "The Chemistry of the Farm," by R. Warrington; London: Vinton and Co. (Limited), 2s. 6d., new edition. \* \* "The Tropical Agriculturist," September; this number contains notes and articles on the following subjects: Fish Culture in Ceylon, Rubber Planting in the Malayan Peninsula and British North Borneo, Vanilla Cultivation in Seychelles and Ceylon, Tea Growing at a High Elevation in Ceylon, Trees for Tea Estates, Troubles of Cocoa-nut Planters in the Straits, Fever in Plants, Flora of Malay Peninsula, A New Pepper, and Wood Fuel. \* \* "Garten Flora," October 1, contains a coloured plate of Cyrtopodium punctatum, Lindl. \* \* "Bulletin de la Société Centrale d'Horticulture du Département de la Seine-Inférieure." \* \* "Le Moniteur d'Horticulture," October 10, with coloured plate of Roses, the varieties being G. Nabonnand and Princess de Bassaraba de Bracovan, both Teas.



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**BOOKS WANTED (J. B.).**—We do not publish the book you name. (A. B.) Apply to Wesley and Son, Essex Street, Strand, London.

**PHOTOGRAPH OF GOOSEBERRY.**—Would "W. B." Buffham, Lincoln, who sent photograph of a Gooseberry, kindly send his full name and address to the Editor?

**JOINING THE ROYAL HORTICULTURAL SOCIETY** (Thos. Bell).—Write to the Secretary, Royal Horticultural Society, 117, Victoria Street, Westminster, London, S.W.

**TOMATOES WITH A MOTTLED APPEARANCE** (Tomato).—The fruits have parts here and there of a waxlike consistency, remaining of a firm texture and of an unripe colour, while the remainder of the individual fruit is quite soft, thoroughly ripened and good in colour of skin, giving a mottled and badly perfected appearance. Various opinions have been given as to the cause, but not any satisfactory explanation of the phenomenon based upon chemical research. It unquestionably arises from a deficiency of potash in the fruit for the transmission and diffusion of the juices; at least, a due supply of that element to the plant has proved of great advantage in preventing the defect. The potash is best supplied in sulphate form, and mixed with the soil, 2oz or 3oz being applied per square yard, some time in advance of planting, pointing in lightly, and again stirring at planting time about 6in deep. It is also noteworthy that phosphate of potash has a similar effect, the plants, especially those grown in pots, being watered after the first trusses of fruits are set with a solution at the rate of  $\frac{1}{2}$ oz to 1oz per gallon of water. It has a very marked effect on the cropping of the plants and the perfecting of the fruits. The phosphate of potash, however, is very dear, some £20 per ton, hence, practically precluded as an article in profitable cultivation. The sulphate acts well, but it is advisable to use it along with superphosphate, say three parts superphosphate and two parts sulphate of potash, applying 4oz of the mixture per square yard, and repeating after the fruit is fairly set in about half the amount at intervals of three weeks once or twice.

**VINES UNHEALTHY (A. B.).**—The specimens that were sent to us before clearly did not represent anything like the actual condition of the Vines, and we are sorry to have been misled by them. Even if you have sent the very best examples obtainable, and taking the others as the worst that could be found, the average condition of the Vines is very much better than we were led to infer from the data supplied. Your letter is much more intelligible than the other we received, and it indicates that you have a good general knowledge of Vine culture. You proceeded cautiously and wisely in the work of renovation. It is quite natural that your employer would not like being without Grapes for a year, and you did the best you could to provide some; and now we understand the case we do not suppose the crop would do any material harm. It is always advisable to allow Vines, as far as possible, to start into growth naturally after much disturbance of the roots, even if extra heat has to be provided afterwards, when new roots are working in the soil, to get the crops and wood ripe by the autumn. You are working at a disadvantage in a high cold dull district; the very large leaves you have sent show this clearly enough. They have not had sufficient sun to elaborate the crude sap—hence their enlargement and the softness of the tissue. The less the light the larger the leaf. Under such circumstances firm borders containing much calcareous and other gritty matter should be provided, and loose rich borders avoided. A multiplicity of surface roots should be the great object, as these are followed by sturdy growth and stout leaves; and whatever extra support may be required for the crops can be applied from the surface. It is also very important that the Vines and laterals be thinly trained. Not a leaf should be permitted to form that cannot develop under the direct action of light. There must not be the slightest suspicion of overcrowding, while all the air possible must be admitted consistently with avoiding sharp currents, even if a little extra fire heat has to be employed to maintain the requisite temperature. Where there are frequent changes of gardeners there are, as a rule, unsatisfactory Vines. We are convinced the Vines referred to will improve under your management, as your past experience with them will be turned to account in a manner adapted to their peculiar condition; a

stranger would have all this to learn, and in the meantime it would be a mere matter of chance if the Vines did not suffer. That is the reason that Grapes are rarely satisfactory when many different persons share in their management.

**NAMES OF FRUITS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (T. R. B.).—1, Jefferson; 2, Bramley's Seedling. A number of replies have to remain unanswered till next week.

**NAMES OF PLANTS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (Zoe).—1, Begonia (see next issue); 2, Begonia semperflorens var.; 3, Begonia fuchsoides; 4, Begonia semperflorens var.; 5, Adiantum Moorei; 6, Adiantum gracillimum; 7, Cypripedium barbatum superbum; 8, Cypripedium pardinum. (Prestonkirk).—No. 6, Mesembryanthemum crystallinum; the fruits will be named in another paragraph. (A. B.).—1, Ilex Aquifolium aureo medio-picta; 2, Ilex dipyreana; 3, Ilex Aquifolium camelliæfolia. (L.).—Calceolaria integrifolia. (C. A. W.).—1, Tradescantia virginiana var.; 2, Aster Novæ-Angliæ var., probably præcox; 3, Aster vimineus var.; 4, Helenium autumnale; 5, Galega officinalis; 6, Rudbeckia fulgida.

## Covent Garden Market.—October 15th.

### Average Wholesale Prices.—Fruit.

|  | s. d. | s. d.  |                                      | s. d. | s. d.  |
|--|-------|--------|--------------------------------------|-------|--------|
| Apples, Blenheim, bush.                | 7 0   | to 8 0 | Grapes, Alicante                     | 0 9   | to 1 6 |
| " culinary, bush.                      | 3 0   | 6 0    | " Colman                             | 0 9   | 1 6    |
| " King Pippins, $\frac{1}{2}$ -sieve   | 5 0   | 6 0    | Lemons, Naples, case                 | 35 0  | 0 0    |
| " Cox O. Pippins, $\frac{1}{2}$ -sieve | 8 0   | 10 0   | Melons, each                         | 1 0   | 1 6    |
| Bananas                                | 8 0   | 12 0   | Oranges, case                        | 16 0  | 21 0   |
| Cobs and Filberts, lb.                 | 0 3   | 0 0    | Peaches, doz.                        | 3 0   | 6 0    |
| Figs, green, doz.                      | 2 0   | 4 0    | Pears, dessert, $\frac{1}{2}$ -sieve | 3 0   | 6 0    |
| Grapes, Hamburgh, lb.                  | 0 9   | 1 6    | " stewing, $\frac{1}{2}$ -sieve      | 2 6   | 3 6    |
| " Muscat                               | 1 0   | 3 0    | Pines, St. Michael's, each           | 2 6   | 5 0    |
|  |       |        | Plums, $\frac{1}{2}$ -sieve          | 4 0   | 5 0    |

### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                       | s. d. | s. d.   |                              | s. d. | s. d.  |
|-----------------------|-------|---------|------------------------------|-------|--------|
| Aralias, doz.         | 5 0   | to 12 0 | Foliage plants, var, each    | 1 0   | to 5 0 |
| Araucaria, doz.       | 12 0  | 30 0    | Grevilleas, 48's, doz.       | 5 0   | 0 0    |
| Aspidistra, doz.      | 18 0  | 36 0    | Lycopodiums, doz.            | 3 0   | 0 0    |
| Chrysanthemums        | 6 0   | 12 0    | Marguerite Daisy, doz.       | 4 0   | 6 0    |
| Crotons, doz.         | 18 0  | 30 0    | Myrtles, doz.                | 6 0   | 9 6    |
| Cyperus alternifolius | 4 0   | 5 0     | Palms, in var., doz.         | 15 0  | 30 0   |
| Dracæna, var., doz.   | 12 0  | 30 0    | " specimens                  | 21 0  | 63 0   |
| " viridis, doz.       | 9 0   | 18 0    | Pandanus Veitchi, 48's, doz. | 24 0  | 30 0   |
| Eriæ gracilis         | 8 0   | 9 0     | Primulas                     | 4 0   | 5 0    |
| Ferns, var., doz.     | 4 0   | 18 0    | Shrubs, in pots              | 4 0   | 6 0    |
| " small, 100          | 10 0  | 16 0    | Solanums                     | 5 0   | 8 0    |
| Ficus elastica, doz.  | 9 0   | 12 0    |                              |       |        |

### Average Wholesale Prices.—Vegetables.

|                               | s. d. | s. d.  |                        | s. d. | s. d.  |
|-------------------------------|-------|--------|------------------------|-------|--------|
| Artichokes, green, doz.       | 2 0   | to 3 0 | Lettuce, Cabbage, doz. | 0 6   | to 0 0 |
| " Jerusalem, sieve            | 1 6   | 0 0    | " Cos, doz.            | 0 6   | 0 9    |
| Batavia, doz.                 | 2 0   | 0 0    | Marrows, doz.          | 1 0   | 0 0    |
| Beans, Scarlet Runner, bushel | 1 6   | 2 0    | Mint, doz. bun.        | 4 0   | 0 0    |
| Beet, red, doz.               | 0 6   | 0 0    | Mushrooms, forced, lb. | 1 0   | 0 0    |
| Cabbages, tally               | 3 0   | 0 0    | Mustard & Cress, pnnt. | 0 2   | 0 0    |
| Carrots, new, bun.            | 0 2   | 0 0    | Onions, bushel         | 3 0   | 4 0    |
| Cauliflowers, doz.            | 1 6   | 0 0    | Parsley, doz. bnchs.   | 2 0   | 0 0    |
| Corn Salad, strike            | 1 0   | 1 3    | Peas, blue, bushel     | 6 0   | 0 0    |
| Cucumbers doz.                | 2 6   | 4 0    | Potatoes, cwt.         | 3 0   | 6 0    |
| Endive, doz.                  | 1 6   | 0 0    | Radishes, doz.         | 1 0   | 0 0    |
| Herbs, bunch                  | 0 2   | 0 0    | Spinach, bush.         | 2 0   | 2 6    |
| Horseradish, bunch            | 2 6   | 0 0    | Tomatoes, English, lb. | 0 4   | 0 5    |
| Leeks, bunch                  | 0 1   | ½ 0 2  | " Jersey               | 0 3   | 0 0    |
|                               |       |        | Turnips, bnch.         | 0 2   | 0 3    |

### Average Wholesale Prices.—Cut Flowers

|                                   | s. d. | s. d.  |                                 | s. d. | s. d.   |
|-----------------------------------|-------|--------|---------------------------------|-------|---------|
| Arums, doz.                       | 5 0   | to 0 0 | Lily of Valley, 12 bnchs        | 12 0  | to 18 0 |
| Asparagus, Fern, bnch.            | 1 0   | 2 0    | Maidenhair Fern, doz. bnchs.    | 5 0   | 6 0     |
| Bouvardia, coloured, doz. bunches | 6 0   | 0 0    | Marguerites, white, doz. bnchs. | 2 0   | 0 0     |
| Carnations, 12 blooms             | 1 3   | 1 9    | " yellow, doz. bnchs.           | 1 0   | 0 0     |
| Cattleyas, doz.                   | 12 0  | 0 0    | Myrtle, English, per bunch      | 0 6   | 0 0     |
| Chrysanthemums, doz. bun.         | 3 0   | 4 0    | Odontoglossums                  | 4 0   | 0 0     |
| " doz. blooms                     | 1 0   | 4 0    | Orange blossom, bunch           | 2 0   | 0 0     |
| Croton foliage, bun.              | 0 9   | 1 0    | Roses, Niphetos, white, doz.    | 1 0   | 2 0     |
| Cycas leaves, each                | 0 9   | 1 6    | " pink, doz.                    | 2 0   | 0 0     |
| Cypripediums, doz.                | 2 0   | 3 0    | " yellow, doz. (Perles)         | 1 6   | 2 0     |
| Eucharis, doz.                    | 2 6   | 3 0    | " Generals                      | 0 6   | 1 0     |
| Gardenias, doz.                   | 2 0   | 0 0    | Smilax, bunch                   | 2 6   | 0 0     |
| Geranium, scarlet, doz. bnchs.    | 4 0   | 0 0    | Stephanotis, doz. pips          | 2 6   | 3 0     |
| Ivy leaves, doz. bun.             | 1 6   | 0 0    | Stock, double, white, doz. bun. | 2 0   | 3 0     |
| Lilium Harrisii                   | 4 0   | 0 0    | Tuberose, dozen                 | 0 4   | 0 6     |
| " lancifolium alb.                | 1 6   | 0 0    | Violets, doz. bun.              | 1 6   | 2 0     |
| " l. rubrum                       | 1 0   | 0 0    |                                 |       |         |
| " longiflorum                     | 4 0   | 0 0    |                                 |       |         |





## The Breeding of Cows.

Out with a party shooting the other day, our equanimity was rather disturbed by the very wild and threatening appearance of a young bull, which appeared to resent our appearance in his private domain. He was not handsome, and if he had been the right colour would have reminded us forcibly of the bull in Paul Potter's famous picture. His plain, cross bred appearance, and painful want of flesh, prompted an inquiry of a labourer as to his breeding and pedigree. He was bred on the farm, and his dam had been the best cow in the neighbourhood for milk and butter, which was the reason for his entire condition. This farmer was using this bull in the attempt to breed some good milkers, and we think he was adopting a sensible course. There is no doubt that the average farm dairy cow is capable of enormous improvement, and as the supply of cows needs much replenishing, in trying to increase the stock we should also try to raise the standard of quality, not with a view to the butcher, but with a view to milk production. The increase in the price of meat may induce farmers to breed fleshy animals; but the demand for good milk cows is a staple one, whereas meat may, and probably will, return to the old 6d. per lb price before next year's calves can be reared and fit for the butcher.

On many large dairy farms (and we speak what we know) the average produce of each cow per day is little more than two gallons of milk. As we often meet with individual cows which will give five gallons per day for months (we once owned a cow which would give seven and a half gallons for some weeks after calving), there seems to be a wide field for improvement. Dairy farmers are often grumbling that they cannot get adequate prices for their milk; that 8d. per gallon the year round does not pay them, and so on. There is little prospect of their obtaining more than that, on an average of several years, and if two gallons per day at 8d., or 9s. 4d. per week, does not pay for the cow's board and lodging, she must be superseded by one which will make a better return.

The multiplication of shows where all the prizes are given for what are practically butchers' beasts has improved the herds of the country in that direction, but at the expense of milking qualities. Efforts have been made to counteract this, and there are now shows where the object is to encourage dairy stock, and at some of the older shows there are now classes for milk cows as such; that is, for the best milkers, on the principle that handsome is that handsome does.

Being short of cattle, we shall have to breed freely, and from such cows as we have; breeding from only the best would mean not breeding enough. We must therefore, perforce, breed from many poor milkers; but we have the power to improve them, and that is by mating them with a bull from a crack cow. An increase of four pints of milk per day, at 8d. per gallon, would, on fifty cows, mean a profit (if there were none before) of more than £300 per annum. Much has been done to improve our breeds of live stock, but too much attention has been given to appearance.

The "John Bull," so familiar as a type of our race, is an example of the flesh producer; but we do not find go-ahead nations like the Yankees paying sole attention to one article of commerce, and we must, like them, put aside sentiment and the worship of appearance in the show yard, and breed that which does most for the balance sheet. A cow which can give six gallons or upwards per day should never be slaughtered so long as she is capable of bearing a calf; but we are sorry to have to say that too often such animals are sold to town dairymen, who give a big price for them, but who make very perfunctory attempts to breed from them.

They milk them so long as they will pay for expensive town keep, and then sell them to the butcher.

A farmer who has an eye to his own profit should never let such a cow leave his premises, however tempting the price, until his farm is so well stocked with similar animals that a draft sale becomes a necessity. Would Mr. Evens, of Burton, Lincoln, have built up such a milking herd as he now possesses if he had sold all his best cows to the first customer? No! It is only by selecting and keeping the best, using the most suitable sires, and refusing to town dairymen the cows which as a duty we should keep for breeding, that we can make permanent improvement in the milking averages of our dairy cattle.

A word about the "Jersey." A cross of this breed is good to keep up, or, rather, bring up, the average of butter-fat to a high standard; but though the Jersey is a good butter cow, it is but a moderate milker. It is "par excellence" the rich man's cow, but is not the "rent payer." For milking qualities an Ayrshire cow, though she be but small, takes much beating; and an infusion of Ayrshire blood will be good for the milk average without affecting the quality. Some of the best milkers we have seen have been cross bred Irish, whose pedigrees were untraceable. Possibly they were Kerry-Dexter, with a cross or two of Shorthorn; but, at any rate, they were marvellous milk producers. We once bought such a cow, apparently barren, for £10, with the intention of feeding her. She turned out to be in calf, and, after calving, gave eight gallons of milk per day for several days, until we sold her for £20 without her calf. We milked her three times a day, as she had a habit of milking herself, which was perhaps the reason why she was sold to us. For national economical purposes such a cow should have been kept for breeding at the public expense.

## Work on the Home Farm.

Of work during the past week there is little to record, for little has been done except ploughing for Wheat. We have been trying to thresh, but the north-easterly drizzle has been so persistent that a day's work has occupied three days, and the sample is hardly in saleable condition. Potatoes are waiting to be picked up, and the Irish labourers are waiting very patiently for the chance to pick them. They began work to-day, but both Potatoes and pickers got wet. We find that prices for picking vary greatly. Maerekers and Scotch Dates are 3s. or 4s. per acre more costly than the others, which is an excellent testimonial to their worth. We prefer Scotch seed of "Up-to-Date" Potato. The Professor is free from disease, but is not good enough in quality.

Notwithstanding the scarcity of labour, the spinning Potato digger finds little favour. There is a strong idea fostered by Potato dealers that these machines greatly damage the tubers. Well, reapers often greatly damage the corn, but nevertheless farmers do not discard their use. A farmer who uses a digger with fair intelligence will never again wish to use a plough; but to make a digger a success there must be no ridges thirty or more inches in width.

The corn market reports make sad reading. We were prepared for lower prices, but not for the absolute panic caused by the glut of ill-conditioned samples. The wet weather may do good in delaying threshing, and so keeping the market comparatively empty. The threshing machine shows that a large proportion of this season's corn was badly got, and farmers who must thresh, should choose their driest stacks to begin with. Barley is also coming out in very poor condition, as well as variable in quality. It is most necessary that Barley should be shot into a heap in the granary. The heap should be well turned and dressed before a sample is taken, so that the bulk and sample may correspond. With improvements in threshing machines which now make very finished samples, there is a tendency to save money and labour by weighing sacks directly from the machine, but though the latter may dress well, it does not mix the whole into equality. That must, and can only be done on the granary floor. Factors soon know perfectly well which men sell direct from the machine, and which shoot their grain and make a proper sample, and they bid accordingly.

It has been too cold and wet for the calves to remain out, and they will be kept up altogether. Feeding cattle are barely holding their own on the pastures, though they are consuming heavily of cotton cake. They will be better in the covered yard eating the excellent white Turnips which we can provide for them. The grass they leave behind will be useful for the ewes later on.

The weather having interfered with other work, we have been able to clean out a few ditches and watercourses. Though there is little to show for this work at the time, it is still most necessary, and no time is better than the present, for with the approach of winter watercourses will become flushed, and far more difficult to deal with.

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**Journal of Horticulture.**

THURSDAY, OCTOBER 23, 1902.

**Provident Gardeners.**

ONE who has most minutely chronicled the history of English horticulture down to his own era, a full generation ago, records the existence in the England of one hundred years ago, a mutual benefit society of gardeners. "Adam's Lodge" was founded in London on the 4th of June, 1781, as "a fraternity of gardeners to establish a fund for the mutual support and relief of each other in time of sickness, lameness, or distress;" and the illustrious Loudon, who preserved so much that was valuable by his writings, adds that in 1824 "the Lodge" consisted of 150 members. From lack of monetary support in proportion to the demands upon its treasury, this earliest gardening benefit society slowly drooped, and finally passed away.

Thirty-six years ago, however, another institution, having exactly the same purpose and aim, was originated at the Green Dragon Hotel, Bishopsgate Street, in the City of London, and the United Horticultural Benefit and Provident Society is to-day swelling its sphere of useful operation to every parish throughout these teeming Isles. As we write a statement of the work and privileges of this society, prepared by its treasurer, Mr. James Hudson, V.M.H., comes to us, and the facts herein stated we are pleased to publish. Mr. Hudson says of the society:—"Like many other such institutions, its progress at first was slow. Thanks, however, to its friends and supporters, its merits were realised by some of those for whom it had been constituted, and for the past sixteen years there has been an uninterrupted run of prosperity. Twenty-one years ago, in 1881, the membership was only eighty-eight; in 1886 it was 177; in 1891 the number was 413;

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and in 1896, 639. At the last audit the numbers were 904 (end of 1901), but now there are 974 benefit members. The executive hope that the number at the close of this, the Coronation year, will amount to 1,000. The funds of the society have increased in a similar ratio. These in 1901 stood at £6,822; at the close of the last financial year, the amount invested and in hand for current expenses were £19,086. At the present time they stand at £20,000 in the aggregate.

"Some of the large benefit societies have heaped up their funds in tens of thousands by the misfortunes of their lapsed members, yet have not so large an average sum per member. In these societies members who allow their subscriptions to lapse lose everything.

#### "The Benefit Fund.

"It is entirely opposed to all reason that in a 'benefit' society any section of the members should profit by the misfortunes of others. It cannot possibly occur in our society. The 'United,' from its commencement, has credited to each member his proportion of the year's working. Thus, some have now to their credit in the books of the society over £100, to which is added yearly 3 per cent. interest. Each member has to contribute his proportion towards the Sick Fund of the current year, after which the balance is placed to his own account. A yearly balance-sheet is issued to each member, so that he knows from year to year exactly what funds he has to his credit. And in the event of his decease, his nominee can know at a glance what that balance is. When a member reaches the age of seventy years he can withdraw his balance in one sum, or in smaller amounts. Lapsed members, i.e., members whose accounts have been closed through ceasing to pay their contributions, can obtain their balances upon attaining the age of sixty years, the sum paid to such being the amount standing to their credit when they became lapsed members.

#### "The Benevolent Fund

is provided for by the contributions of life and honorary members, and by a small annual sum from each benefit member. This fund provides for all members after they have passed the age of seventy years. It also assists members in cases of accident or other peculiar forms of distress, and the widows of such members who die in needy circumstances. The committee appeal urgently for more honorary and life members so that this fund may be increased in proportion to the number of members. With one thousand benefit members, the number of honorary and life members should be at least one hundred.

#### "The Convalescent Fund

is a purely voluntary one on the part of the benefit members. It was instituted through the kindness, liberality, and business forethought of Mr. N. N. Sherwood. Its funds are devoted to assisting members by a grant, so that they can obtain a change of air during convalescence. In the case of young gardeners who may be in lodgings during sickness, it is an important aid to their recovery.

#### "The Management Fund

is directed to the working expenses of the society. During 1901, with 904 benefit members, it amounted to £163 14s. 10d., an average of about 3s. 7d. per member, towards which each member contributes annually the sum of 2s. 6d.; the balance being made up from the interest of monies standing to the credit of the lapsed members, and by the proceeds from advertisements in the annual report.

"The committee considers that this society in a measure fulfils what has been often urged upon the community at large, viz., the provision of 'old-age pensions.' It is a self-help society, its rules being framed so that the utmost possible return may be made to every member belonging to it, and in proportion to the number of years each one has contributed. The secretary is always willing to supply any information as to scales of contribution, &c. The funds are invested in approved trustees' stocks, which yield on an average about 3 per cent."

## Quinine and Its Romantic History.

Many of the greatest benefactors to mankind have been discovered through the merest of accidents, of which saccharin may be cited as a case in point, but we doubt if there is any other drug which has a more romantic history than quinine, which may really be said to be now a household medicine, as well as a household word.

Although Peruvian Bark was used in England as early as 1655, and was advertised in 1658 as "the excellent powder called by the name of Jesuits' Powder, brought over by James Thomson, merchant, of Antwerp," it was not until 1677 that the drug was included in the British Pharmacopœia. What is now, however, known as quinine was not discovered till 1811, and it was not obtained in a pure state by complete separation from the other constituents of the bark till some ten years afterwards.

Put into unscientific language, quinine may be described as the base, or essential principle, of the bark of certain individuals among the Cinchona family of trees, the result being one of the most important of the alkaloids. This bark was first introduced into Europe in 1632, although it is generally said to have been unknown there before the return to the City of Madrid by the Countess of Cinchon, the wife of the Viceroy of Peru in 1640. This lady, from whom the bark-producing trees derive their botanical name, had been cured by it of a fever contracted in Lima in 1638, but the Jesuits who had settled in Peru were fully alive to its virtues long before, and as those missionaries were the general agents for its distribution in Europe, it came to be known as "Jesuits' Powder," while in Madrid it was called "Countess' Powder," and in Rome as "Pulvis Patrum."

In the cities of Brussels and Antwerp it was sold for its weight in silver, which was then about ten times the price of opium, and in 1658 twenty doses were sent from Rome to Paris at an expense of sixty florins. Louis XIV. used it for a dangerous illness, and our own Charles II. had also had it administered to him. The bark was looked upon as almost a miraculous cure for fevers and agues right down to the end of the seventeenth century. Humboldt raised doubts as to whether the curative nature of the bark was originally known to the Peruvians, but in the light of later information there can be little doubt the natives did know.

The tradition is that the properties of the bark were first practically realised by a fever-stricken Indian, who, being left behind by his companions as is their wont if sickness overtakes one of their number, drank of the stream which flowed through the forest wherein he was stricken, and which had become impregnated by the bark of the overhanging Cinchona trees. His cure was so rapid that on his return to his tribe his restoration to health was looked upon as miraculous, with the result that the Indians flocked to the stream to partake of its wonderful water. The Cinchona trees were chiefly to be found upon the Eastern slopes of the Andes, and until the discovery of quinine the Peruvian bark of commerce was drawn in the main from this district, the finest quality, grown in the town of Loxa, and known as Crown Bark, being long reserved for the Royal Family of Spain.

Of course, the demands of Europe soon denuded the native forests of their trees, and led to the cultivation of the Cinchona in other districts. The Dutch were the first to make the experiment of cultivating the plant in Java, where they met with much success, their example being followed by the Indian Government and by English residents in the East, with the result that for many years past there have been extensive plantations in the Neilgherry Hills, British Sikkim, Bombay, and British Burmah, while the growers of Ceylon have extensively planted it in Colombo. Some fifteen years or so ago there were only seventeen known factories of quinine in existence—being six in Germany, four in America, three in France, two in Italy, and two in England—the total consumption then amounting to 4,250,000 ounces, which must, however, have been since largely increased through the epidemics of influenza and other causes. Thus during the cutting of the unfortunate Panama Canal some 200,000 ounces of quinine were distributed every year among the labourers to counteract the malarial fever of the Isthmus. Madame de Genlis founded a novel on quinine, and Lamartine indited a poem in its praise, and, all round, the drug possesses a decidedly romantic history.—WM. NORMAN BROWN.



### *Lælio-Cattleya* × *Cooksoniæ*.

The parentage of this hybrid was *Cattleya labiata* and *L.-c.* × *Clive* and it is a handsome and massive flower. The sepals are rosy lilac and the petals the same. The rich velvety lip is bright purple or crimson-purple, deepening towards the contortuous, indented marginal parts. The flower seen at the Royal Horticultural Society's meeting in the Drill Hall, James Street, Westminster, on September 3, was strong and substantial in its composition, denoting careful culture. Norman C. Cookson, Esq. (gardener, Mr. H. J. Chapman), Oakwood, Wylam-on-Tyne, was the exhibitor, and was accorded a First Class Certificate. Our illustration is from a drawing by Mr. Geo. Shayler.

### **Dendrobiums: Their Growth and Culture.**

(Concluded from page 351.)

*D. Parishii* is a Moulmein species, sent home by the late Rev. C. Parish, whose name it commemorates. It is an ugly grower, but produces very pretty rose-purple blossoms, and thrives with the deciduous section.

*D. Phalaenopsis* is the finest of the Australian group, and almost as freely distributed as *D. nobile*. Numberless varieties of this superb species exist, the colour varying from pure white to the deepest crimson purple. *D. Pierardi* is a cheap but very effective species, producing an immense number of its pale rosy-mauve blossoms in spring. In large baskets the pendant stems have a delightful effect, especially when backed up by green Palms or Ferns, as when in flower it is destitute of foliage. It is a very widely distributed plant, naturally growing wild in Moulmein, India, and the Sikkim Himalayas. *D. primulinum* has stout stems and pale mauve flowers, and is worthy a place among the deciduous species.

*D. speciosum* is a large growing evergreen plant, producing large dense racemes of white flowers with a creamy suffusion and purple spots. To flower it successfully, it should have a few weeks in the open air in autumn after the growths are made up, and be kept well on the dry side in winter. Its variety *Baneroftianum* is smaller, but bears more graceful flowers. The variety *Hilli* is taller in growth than the type and bears paler tinted flowers.

*D. superbicus* is a showy species from the islands about the Torres Straits, bearing terminal and side racemes of bright crimson-purple flowers in the autumn, and requiring similar treatment to *D. Phalaenopsis*. *D. superbum* is a long stemmed deciduous species, very variable in colouring, the type having magenta purple flowers. It is a native of the Philippines. *D. taurinum*, *D. stratiotes*, and *D. strebloceras* form almost a distinct section of the genus, the peculiar twisted segments being different from anything else in it. These plants are difficult to establish and grow, and never attain anything approaching their full size in this country.

*D. thyrsoflorum* is one of the finest of the evergreen sort, producing lovely racemes of milk-white flowers, with a bright yellow lip. Fine well-flowered specimens of this noble Orchid are splendid for conservatory decoration or for display in the flowering house. It is one of the best known, having been introduced from Moulmein in 1864 by Messrs. Hugh Low and Co. *D. tortile* is a little like *D. nobile*, pale rose in colour on the outer segments, the lip yellowish, with a purple blotch. It flowers in June.

*D. Wardianum* is a well known and beautiful sort, without which no collection is complete. The flowers have ivory-white sepals and petals, tipped with magenta, the lip having a yellow area about the base, with two eyes like blotches of maroon. The varieties differ a good deal in size and substance, but I have never seen a form that is not worth growing. It succeeds with the other deciduous species. So far I have not mentioned any of the hybrids now so plentiful in this genus, but as this note is already overlong, I hope, with the Editor's permission, to touch on these briefly on a future occasion.—H. R. R.

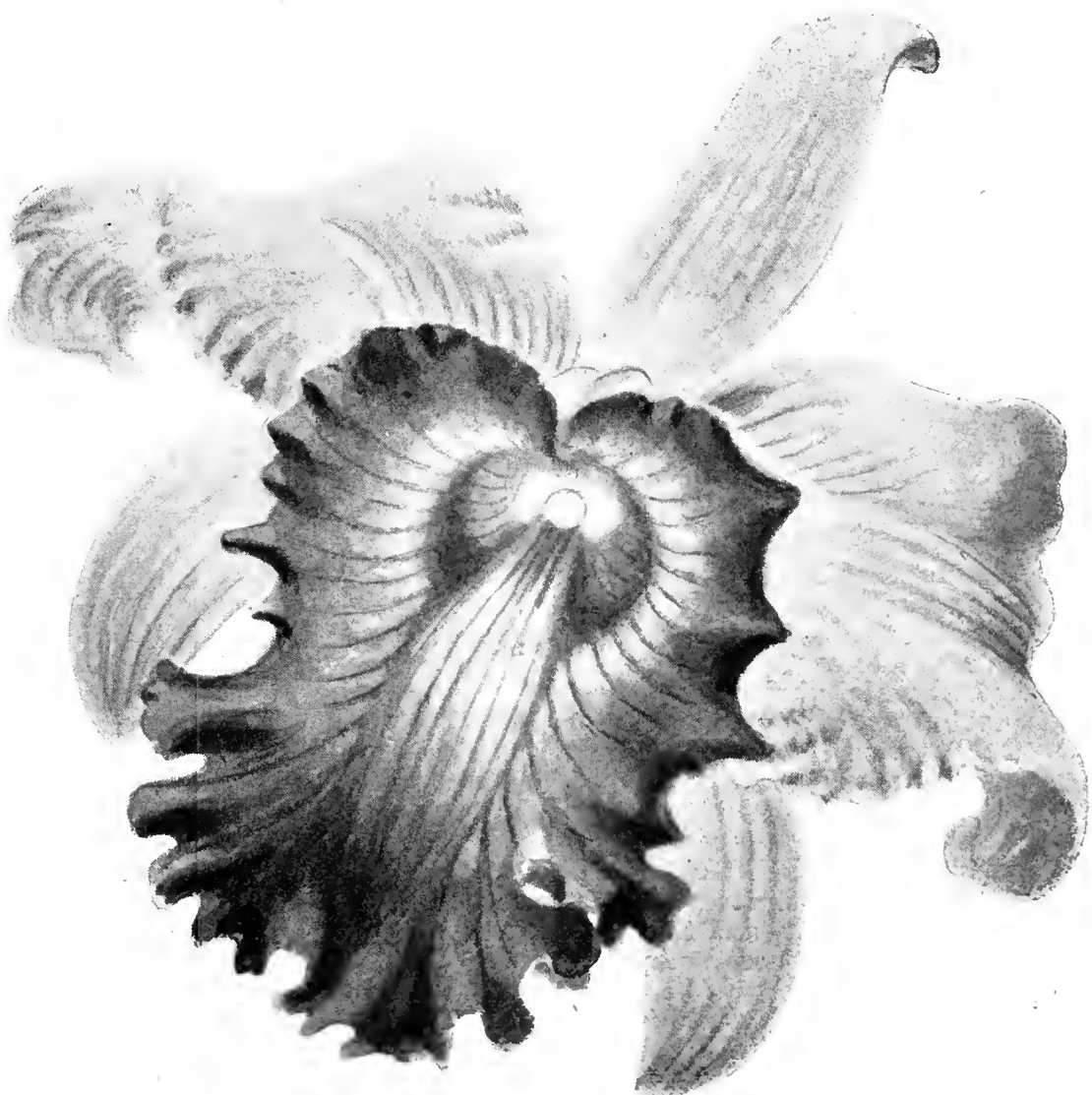
### **The Week's Cultural Notes.**

The *Pleiones*, or Indian Crocuses, are very pretty and bright when in flower, and as the earlier species are now opening, it is time to draw attention to them. Directly the flowers are past the plants begin to grow and root. Or perhaps it would be more correct to say that the formation of the flower is the beginning of the growing season. At all events, root action immediately follows, and unless these are to be checked, repotting must follow close on the heels of flowering. They are grown in a variety of ways, but the usual mode is in small, flattish pans holding from a dozen to twenty bulbs.

The compost may consist of equal part peat and loam fibre, a little chopped sphagnum, and a sprinkling of finely broken crocks. Near the drainage place a layer of rough moss, covering this again with a thin layer of compost. Then pull the old plants to pieces, laying all the new pseudo-bulbs together, and removing all but a few of the old dead roots. Plant them evenly all over the surface of the pan, rounding the compost a little, and allowing the base of the new bulb to just enter the compost. The few old roots left will serve to steady the plant in position until new ones form.

Beyond a single watering to settle the new soil about the roots it is not wise to moisten *Pleiones* after repotting until root action is free. Then a gradual increase is necessary, a large amount being required in the growing season, and a very moist atmosphere. Other dwarf cool house Orchids advancing for flower, such as *Sophranitis grandiflora*, should be kept just moist, an excess of moisture or dryness just now being undesirable. When cold winds are blowing very little ventilation will be needed, but during damp, mild weather keep plenty of air on, and just warm the pipes to keep it moving.

When *Miltonia spectabilis* and nearly allied kinds have been grown in the cool house during the summer, it will be wise to remove them now to slightly warmer quarters. If none are at command, keep them well on the dry side, and out of the reach of draughts all through the winter. The yellowish tinge seen in the foliage of these Orchids seems quite natural to them, even healthy plants carrying it. More, perhaps, than any other Orchids, they like an equable moist and mild temperature the whole year through, and in winter sufficient root moisture to keep the pseudo-bulbs plump.



*Lælio-Cattleya* *Cooksoniæ*.

An early opportunity should be taken to perform the usual winter cleaning of the houses. The woodwork and stagings may be repaired and fresh gravel or material used in place of the old.—H. R. R.



## Culinary Apples.

### An Estimate of a Dozen Varieties.

**KESWICK CODLIN**, as an early August variety for cooking, still remains one of the best. Its quality is first class (some people like it for dessert), and the tree succeeds well as a bush in the garden or as a standard in the orchard.

**STIRLING CASTLE**.—As a bush tree for the garden or the field, grown on the English Paradise stock, this is one of the most prolific and profitable August and September Apples that can be grown. A real poor man's friend.

**FROGMORE PROLIFIC** is another September Apple which should find a home in every garden. It is one of the heaviest and most consistent cropping Apples we have.

For October and November we have a wide selection, and the following may be relied on as excellent from every point of view:—

**GRENADIER**.—A large, yellow, handsome Apple, by many esteemed as the best October and November variety. It is very prolific, and excellent to grow for market.

**ECKLINVILLE SEEDLING**.—A well known variety. One of the heaviest cropping and best orchard sorts we have.

**STONE'S APPLE**.—This is another large, handsome October variety. It is light yellow in colour, with a faint flush of red on the sunny side. It is a good bearer, and a popular market sort.

From November to the end of January the following are the best:—

**LANE'S PRINCE ALBERT**.—One of the best known sorts, and certainly one of the most consistent and heavy croppers of any we have. No garden or orchard should be without it.

**BLenheim ORANGE**.—Grown as bushes on the English Paradise stock it succeeds admirably, crops regularly and heavily, even on comparatively young trees. Grown in this way it is as well suited for dessert as it is for the confectionery. When grown as a standard in the orchard on the Crab stock the tree attains to a great size, and returns valuable crops most years; but as a young tree in the orchard on this stock it is usually a long time before it reaches a state of fertility. This drawback notwithstanding, no orchard should be without this—one of the handsomest and noblest of Apples.

**BAUMANN'S RED REINETTE**.—A fruit of medium size, of attractive colouring, very prolific, and first class quality.

From January to May the following are amongst the best:—

**ROYAL LATE COOKING**.—A large, heavy, handsome, yellow variety. The tree is a strong grower, prolific cropper, excellent for dessert late in the season, and will keep sound and good way into June.

I have only two more varieties to mention, and the difficulty I have in the richness of selection at hand is to know which to leave out and which to include. Wellington, as one of the best known and best esteemed, naturally suggests itself as having claims for this time of the year superior to any other. I am sorry not to include it in my twelve, and the reason is that it is not a consistent bearer, and the tree is not an over-good grower; but the strongest reason of all is in the fact that Wellington and Blenheim Orange, between them, as parents, have given us an Apple which is in every way superior to Wellington, namely:—

**NEWTON WONDER**.—I don't know to whom the credit of raising this variety belongs, but whoever he may be he may justly feel proud of having been the means of giving it to the world. [Messrs. J. R. Pearson and Sons, Lowdham, Notts, were the introducers of it, a member of the firm having discovered it at a Midland show.—ED.] It is one of the best and most valuable Apples in cultivation. Its cooking qualities are very much like, and equal to, Wellington, and its handsome and attractive appearance equal to the best samples of Blenheims, and this is saying a great deal. It is one of the strongest growing Apples we have, and for bushes grown in the garden should be worked on the Paradise stock. It is in season from March to the end of May.

If it had not been that I have pledged myself to mention only twelve sorts, I should have said that the only variety worth growing for the purpose of making mince-pies is Royal Russet, and I am sure your Irish readers would never forgive me if I did not include Chelmsford Wonder, a variety highly esteemed in the Green Isle. This is only a diversion, and I must proceed to give my latest and last choice of the twelve, and this must be in favour of **STRIPED BEAUFIN**. This is a handsome and attractive variety, and towards March and April is excellent for dessert.—O. THOMAS.

## A SEEDLING GOOSEBERRY.

On page 377 there is illustrated a single shoot from a seedling Gooseberry raised by one who has long been a reader of, and contributor to, this journal. He writes as follows: "The enclosed photo is a branch from a seedling Gooseberry, with eighty-two fruits upon it. There are four other branches on the tree bearing fruit in a similar manner. The photo was taken before the fruit was fully grown, and you may remember that I enclosed the top of one of the other branches with ripe fruit for you to see when I sent the photo. [A laden branch.—ED.] The tree is grown in the cordon style. I have raised a number of Gooseberries, Strawberries, Raspberries, Apples, Cherries from seed, &c., and I have been cross-breeding with a great number of flowers. I have also tried a number of experiments, for the last forty years, with plants, seeds, &c., and regret I cannot find time to send more than occasional notes to the *Journal of Horticulture*.—W. B."

## STRAWBERRIES IN POTS.

Successful Strawberry forcing depends largely on the treatment the plants are subjected to during their preparatory course, and especially at what is known as the resting period prior to starting. The wintering of Strawberries in pots by stacking them one upon another in sawdust or other material against a wall, or housing them on the border of fruit houses, is not only unnecessary, but absolutely injurious, as the soil not unfrequently becomes dry, and the currents of air induced by the free ventilation, waste the energies of the plants. The forwardest will now have the crowns well developed and the pots filled with healthy roots. To preserve them is a point of some importance, as when they get frozen and suddenly thawed their collapse is certain, and the plants start badly in consequence. If intended for early forcing, they will be the better for having the lights of a frame placed over them, the pots being plunged in ashes or cocoa-nut fibre refuse, or even tree leaves, but not so as to heat. The lights must be withdrawn in mild weather, and only used in case of heavy rains, when they must be tilted, as in case of frost.

The plants should be regularly examined for watering, supplying it only to such as stand in need, never allowing them to suffer, as the Strawberries are much injured when allowed to become dry at the roots. Place late plants in a raised bed, or plunge in ashes or other material on the flat in a sunny position to finish the ripening process, and they will require to be duly supplied with water. If any plants remain long without needing a supply, or the soil becomes very wet, examine the drainage, rectifying it wherever defective, expelling worms with lime water. Sun and sharp frosts ripen the growths and solidify the crown better than the atmosphere of houses.—G. A.

## A REMEDY FOR THE CODLIN MOTH.

When recently visiting Mr. Thomas Pendered, at Redwell, Wellingborough, and while inspecting his crops of fruit, he informed me that he had pretty well cleared his garden of the codlin moth, though at one time it was badly infested with it, as it adjoined a garden in which its ravages were largely apparent. Mr. Pendered stated that when he finds it necessary to take remedial measures, he requests a chemist to mix him a quantity of dressing compound, composed of two parts of black sulphur to one part of softsoap; say, 2lb of the sulphur to 1lb of softsoap; it is then placed in a tin ready for use. A portion of this is placed in a pail, and sufficient boiling water poured over it to form a kind of batter, and to this is added a half pint of carbolic acid, and the whole is stirred up well together. It is also constantly stirred during the time of using, to prevent the sulphur sinking to the bottom.

The mixture is applied to the trunk and branches of the trees by means of a brush at the end of a long handle, such a brush as is employed for tarring a fence; and by means of the brush the compound is well rubbed into the crevices in the bark. This dressing is applied during February and March. In addition to the dressing applied to the trees, the soil about them is dressed with one part of soot to two parts of quicklime. Mr. Pendered employs half a ton of soot and one ton of lime to an acre of orchard trees. A sweep is employed to sow the soot first, and the lime is spread over it. These are put on the soil in early spring, and allowed to remain on the surface till washed in by rains. After a time the surface may be gently forked over with advantage. Mr. Pendered stated that he had found this remedy most successful. He states that he gathered seven bushels of Apples from two trees, and he thinks there was not one among them pierced by the maggot. The application of lime and soot is given once in three or four years.—R. D.

## Lilies of the World.

(Concluded from page 365.)

**PHILIPPINE ISLANDS LILY.**—So far, these islands have only given us one species of Lily, and that one is of extreme beauty. Now the country is being opened up, soon collectors will take to despoiling Nature. Up-country we may look for many fine species coming from this interesting group of islands. *Philippinensis* flowers in the way of *L. longiflorum eximium*, but more refined and delicate looking. The first time I saw this fairy-like Lily I measured it, and found it 10in long. It is a greenhouse plant in Europe, but I think it could be grown outside in South Africa.

The only Lily I have seen growing in the gardens about Cape Town is *L. longiflorum eximium*. It would therefore, appear that amateur gardeners have not yet taken up the culture of this most delightful family. I will, therefore, name three selections, each one containing different Lilies from the other lists, with the view of meeting the convenience of all as regards outlay. No. 1 selection is the least expensive; No. 2 next; No. 3 the highest priced—while all are equally beautiful. Any one of the lists are a good selection, and all the lists put together will make a really handsome collection. I have omitted *L. candidum* from the lists, as it should be despatched from England in August or September; not later, if possible, and on arrival planted at once.

On arrival they can be placed in a box of semi-moist earth, and kept in the coolest place possible till the weather cools a little, and once a week they should be examined to discourage root growth, and to see they are not suffering in any way; or they may be planted in kerosine tins, covered with at least 4in of soil, and the tins well drained—the tins kept in the coolest place at command, and there remain till the flower buds are formed, when the tins may be placed on the stoeps. If planted in pots, let the pots be plunged to the rim in coal ashes in a cool place, and remain till in bud; then the pot in which the bulb is growing dropped into a larger pot, and then placed on the stoep. The soil in all cases should be moist, but never wet, except in the case of the moisture-loving Lilies, which should get an increase of moisture when growing. So treated, you can enjoy the Lilies as an ornament to your house, and can decide from their habit of growth the best place to plant them out in your garden when the time to plant out arrives.

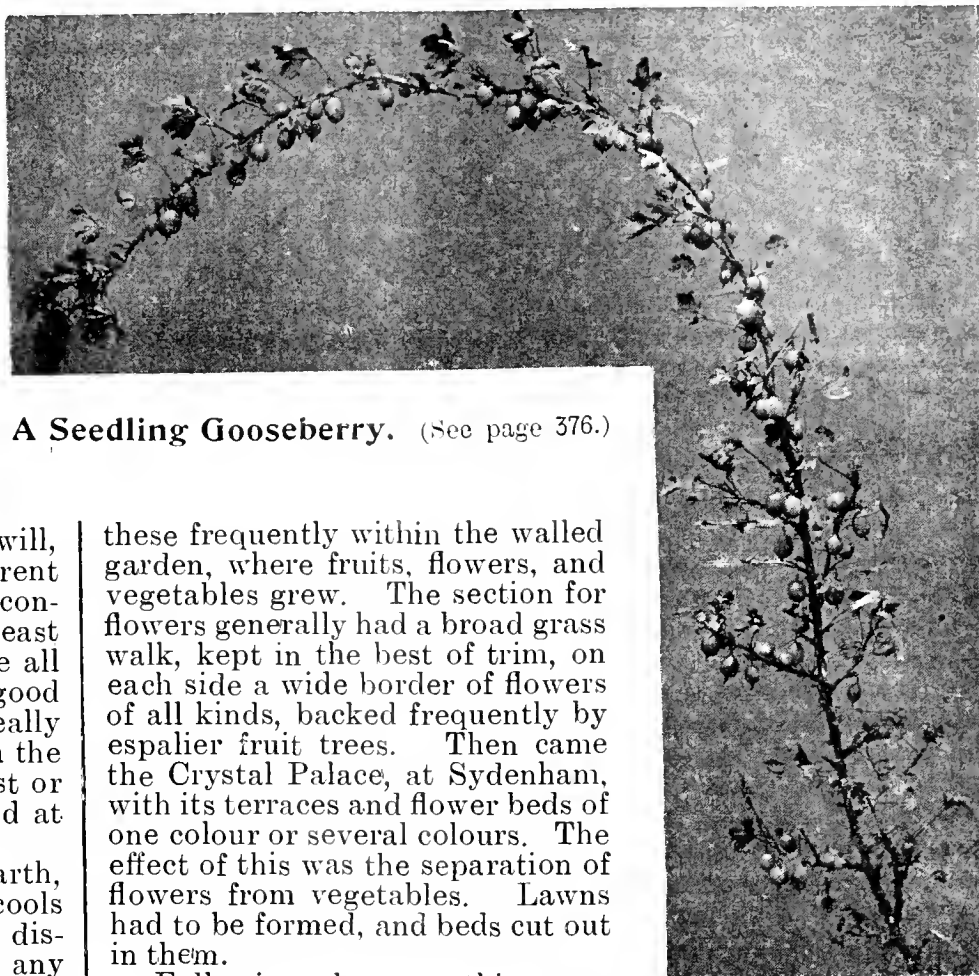
No. 1 selection: *L. auratum* type, *L. Browni*, *L. canadense flavum*, *L. chalcedonicum*, *L. croceum*, *L. davaricum erectum* and incomparable, *L. longiflorum robustum*, *L. Martagon dalmaticum*, *L. pardalinum* type, *L. pomponium*, *L. speciosum roseum album Kraetzeri*, *L. speciosum rubrum Melpomene*, *L. superbum*, *L. testaceum*, *L. tigrinum splendens*, *L. elegans Beauty*, *L. elegans Van Houttei*.

No. 2 selection: *L. auratum platyphyllum*, *L. auratum Virginale*, *L. davaricum Sappho*, *L. Hansonii*, *L. Humboldtii*, *L. Leichtlinii*, *L. Martagon album*, *L. pardalinum Bourgæi*, *L. Parryi*, *L. speciosum punctatum album*, *L. speciosum purpureum*, *L. tigrinum*, *L. Fortunei* (single and double), *L. elegans Batemannæ*, *L. elegans Prince of Orange*, *L. elegans G. F. Wilson*, *L. canadense rubrum*, *L. elegans Sunset*.

No. 3 selection: *L. auratum pictum*, *L. auratum rubrovittatum*, *L. Bolanderi*, *L. Columbianum*, *L. giganteum*, *L. Henryi*, *L. japonicum odorum*, *L. monadelphum Szovitzianum*, *L. napalense*, *L. pardalinum Michauxii*, *L. parvum*, *L. speciosum album Crown Princess*, *L. speciosum punctatum*, *L. speciosum rubrum multiflorum*, *L. sulphureum*, *L. elegans Alice Wilson*, *L. elegans robustum*, *L. elegans Wallacei*.

The opening remarks in this Lily reading, with the three selections of Lilies I have made, will, I think, be of service to those who may take up Lily culture, whether as amateurs or professional gardeners. The selections and directions represent the experience of one of the very earliest cultivators of Lilies since they last came into vogue; we must not say "fashion," that word properly belongs to ladies when referring to the latest fashions in bonnets, &c. The word fashionable may also be applied to colours in cut flowers, as they rank fairly as floral millinery, but to use such terms to our garden plants is too shocking.

From time to time there are changes in the arrangements of gardens, gardening being a progressive art, and plants have to be sought out to meet all new arrangements. I remember sixty years ago we had only flower borders, and



A Seedling Gooseberry. (See page 376.)

these frequently within the walled garden, where fruits, flowers, and vegetables grew. The section for flowers generally had a broad grass walk, kept in the best of trim, on each side a wide border of flowers of all kinds, backed frequently by espalier fruit trees. Then came the Crystal Palace, at Sydenham, with its terraces and flower beds of one colour or several colours. The effect of this was the separation of flowers from vegetables. Lawns had to be formed, and beds cut out in them.

Following close on this came Nesfield's ideas, which were illustrated in the gardens of the Royal Horticultural Society, South Kensington; very low Box edgings, used in the formation of the beds, and instead of flowers, pebbles, coloured stones finely broken up, bricks reduced to rough powder, broken glass, and different coloured substances. This held on for a short time. Then came Mr. William Robinson's denunciation of the whole system of flower gardening, and he preached from the house-tops hardy herbaceous plants. After some fifteen or twenty years' pegging away on the one text, people began to think there was something in all the noise, and this brought about a great revolution. Carrying out reforms is generally done by a compromise; so now we have flower beds, carpet beds that vie with Paisley shawls in design, flower borders galore, and, as at Park Lane side of Hyde Park, tropical plants let into the grass, such as Palms, Bananas, &c., &c., while beds of Carnations, Roses, &c., are seen everywhere. And in spring beds full of Hyacinths, Tulips, Daffodils, Pansies, Violas, Crocus, &c., &c. The Park Lane side of Hyde Park is a paradise of flowers, when there is sufficient sun to open them, and enough heat to keep them alive. In the Cape Peninsula you have twelve flower months in your calendar. Surely Paradise must have been in this favoured land.—PETER BARR, V.M.H., Cape Town.

## PINEAPPLES.

All young plants should now be arranged so as to obtain the fullest benefit of light and air. As the sun diminishes a corresponding diminution of temperature should take place at night until it reaches the winter standard of 55deg to 60deg at night and 65deg in the daytime. Ventilate freely whenever the external conditions are favourable, paying particular attention to watering. An inspection of the plants should be made once a week, and whenever a plant needs water supply it copiously at about the same temperature as that of the bed.

Plants on which fruit are now appearing will perfect them at a time when other fruits are scarce, and should therefore be afforded a good position in the fruiting house. Continue 70deg as the minimum temperature in the fruiting house, though on cold nights a decline of 5deg may be allowed and 5deg more in mild weather, 75deg artificially by day, and 85deg to 90deg from sun heat, closing the house at 80deg, sprinkling the paths as may be necessary when they become dry, and on sunny afternoons an occasional syringing will be advantageous, keeping the bottom heat regular at 85deg to 90deg.—PRACTICE.





### Pompon Chrysanthemums.

Pompon and Anemone Pompon varieties, such as those illustrated on page 383, are well suited for amateurs or small growers, and they are favourites to a large extent with market men and florists, on account of their neat habit of growth and profusion of bright flowers. They stand a deal of knocking about, and are useful for cutting from. Pompons are generally very much neglected in private gardens, where their several merits might win for them more appreciation and variety of employment. For decorative use they are best grown as bushes, cuttings being inserted during December or January, and the plants grown on in the usual manner, but confined to pots, 6in in size at the largest, unless a dense bush is desired. Bush plants are topped when 4in high. Those intended for tall bushes should have three of the strongest shoots selected, which should be allowed to extend, retaining all side shoots. These are not topped, but are allowed to throw out their abundance of flowers. As tall bushes, the Pompons are exceedingly attractive.

### Chrysanthemums at Cardiff.

A few days since, in response to an invitation from Mr. G. Williams of Manor House, Cardiff, I had the pleasure of looking over the very up-to-date collection of Japanese Chrysanthemums grown by his foreman, Mr. J. Howe, a very old and successful exhibitor at Cardiff and elsewhere. I found a very well grown and uniform lot, comprising over 800 plants, which amply testified to Mr. Howe's skill as a cultivator. The following are the chief varieties: H. E. Hayman, May Vallis, Mad. P. Radaelli, J. C. Neville, Mrs. Emma Fox, very dwarf; Matthew Smith, in fine form; Lord Salisbury, Mafeking Hero, Miss Alice Byron, W. R. Church, Lord Ludlow, grown from cuttings struck in February, and carrying one bloom in an 8in pot; Mons. Ch. de Léché, thirty plants, for one bloom each, in 8in pots; Florence Molyneux, very good; Mrs. Barkley, twenty-four grand plants; Mrs. J. J. Thorneycroft, C. J. Salter, splendid; L. Mountford, Nellie Perkins, Calvat's '99, Mrs. Greenfield, Rev. W. Wilks, Ben Wells, Duchess of Sutherland, Hettie Dean, Miss Ethel Fitzroy, very promising; Mrs. T. W. Pockett, one of the new Australians; Godfrey's King, a regular young tree; Queen Alexandra, Sensation, nice habit; Exmouth Crimson, Godfrey's Triumph, another tree; Gen. Hutton, very tall; Masterpiece, Godfrey's Pride, and C. McInroy.

The whole of Godfrey's new ones are conspicuous for their grand habit and growth. There were also Hy. Barnes, a rather tall grower, but vigorous; Mrs. A. Macdonald; C. Penfold, W. E. Vowden, Mrs. E. Hummell, Dr. Pywell, tall, but good; Mr. G. Lawrence, Miss Jarvis, Mrs. H. Emmerton, Mr. R. Clayton, C. Jarvis, and a fine batch of Mad Carnot, and its sports were noticeable amongst the older varieties.

I failed to find any trace of rust, and even should it appear, I don't think it could do much harm now to such robust plants. Mr. Howe was busy bud-taking, and I am looking forward to paying him another visit when they are in bloom. If the present promise is fulfilled, a journey of fifty miles should be worth undertaking for the sight.

A few days afterwards I was in London with a few hours to spare, so I ran down to Earlswood and paid Mr. Wells a visit, and was amply repaid for the journey. I had not time to make more than mental notes, but some of those made a lasting impression. Mr. Wells has a most promising lot of Mr. Pockett's Australian seedlings; several of them reminded me of T. Carrington and Pride of Madford. They were all under number, but H1 and H2 made lasting impression, as did Hy. Barnes, Mrs. T. W. Pockett, Donald McLeod, which Mr. Molyneux mentioned to me last winter as a good one, but I could not find it, for the simple reason that it is not yet in commerce.

Ben Wells seems to be a favourite from the number grown. Mr. Godfrey's new varieties were all in fine form and confirmed my previous opinion of them. Mad. Herewage, and its parent Australia, grow to a great height here. After seeing the plants in pots, we paid a visit to a piece of land adjoining the sewage farm, where Mr. Wells grows the early flowering varieties, some of which were in bloom. Goacher's Crimson struck me as being a particularly desirable market variety, and Parisiana looked a useful white. Mad. Marie Masse and its sports made a brave show.

All the exhibition varieties are also planted out for stock plants. Mrs. T. W. Pockett, of which Mr. Wells had a large batch growing in the open, looked splendid, and is worth trying,

but not at half-a-guinea a plant. Darkness coming on compelled me to get away, and doubtless Mr. Wells was thankful that "the pumping process" was at an end.—A. H.

### New Town Nurseries, Bedford.

A visit to Mr. Isaac Godber, who is a grower of Chrysanthemums, &c., for market, which are successfully grown in open quarters. These remarks are confined to a few varieties considered worthy of growing, and useful for early market and mid-season work. First comes Madame Marie Masse, the earliest pink flowering variety in cultivation. The Masse family are good for free and early flowering, being of good sturdy habit and requiring no stakes. Crimson Masse is a bronze crimson sport from Madame Marie Masse, and is a good useful variety. Ralph Curtis Improved is white, or creamy white; it is a sport from Madame Marie Masse, and is quite distinct from Ralph Curtis, being much more vigorous and free. Horace Martin, a bronzy yellow, is early and a good traveller. It is sure to supersede yellow Madame Desgranges as a market variety. Its habit is good and free.

Market White furnishes a grand variety, and of great substance of bloom: a very free flowerer, and pure white; September and October. Crimson Masse is the least vigorous of the family; the other varieties, the pink Madame Marie Masse, the creamy white Ralph Curtis Improved, and the yellow Horace Martin, are all exceptionally vigorous and free. The old Madame Desgranges (creamy white) and the yellow or Geo. Wernig variety are still grown in limited quantities at New Town Nurseries, Bedford.

Harvest Home, red, tipped with gold, is a very distinct variety, and has been a favourite as an early bloomer for several years, but its popularity with market growers is on the wane. The blooms are best cut before they are fully open. White Quintus, a pure white sport from O. J. Quintus, has a good habit and is a free flowerer. The blooms were just opening when my notes were taken in early October.

Ryecroft Glory is an old favourite October yellow, its habit and vigour being all that could be desired. Roi de Preeoces, a bright velvety crimson, should be cut before fully open; it is good, vigorous, and free; September and October. Vice-President Hardy, fiery chestnut, vigorous habit, a striking and distinct variety; its splendid habit makes it a favourite for cut flowers; September and October. Golden Queen of the Earlies, a deep yellow sport from Queen of the Earlies, with all the good points of its parent, comes in October.—G. R. A.

### A FINE LAPAGERIA.

One of the finest, if not the best, of these choice summer plants I have seen is the roof-trained specimen growing in a greenhouse in Colonel Brymer's garden, near Dorchester. Colonel Brymer's name has been familiarised by its association with choice Orchids for years past, notably Dendrobiums and Cattleyas, one each of which bears his name, and his collection of these plants, together with hybrids of his own raising, is likely to be handed down to future posterity. Orchids here find a congenial home. Many fine specimens of great value are to be seen beside quantities of smaller growing species. The raising of Orchid seedlings, too, would seem to be taken up with zeal and success, judging from the tiny specks on flannel seed-beds, and others ranging in differing stages to that of the matured specimen.

The object of this note, however, is not Orchids, but Lapagerias, which to many beside myself have been a source of admiration by reason of its wealth of flower, its fine form, and deep colour. The plant occupies a corner of the house near the back wall, and the vigorous shoots rise to the roof above and spread along its entire length of some 80ft or more. The picture displayed is a striking one, for flowering shoots depend from the roof with such profusion and regularity that the whole house seems aglow with colour. Little stone weights fixed to the points of the shoots as they begin to grow in spring prevent them curling round the wires or rising to the roof glass above, and though much time and trouble is thus entailed, it is more than repaid in the pleasing character which their drooping trails of flowers convey.

The aspect of the house is north, with a lofty wall behind, which affords shade and conditions such as the Lapageria enjoy. Certainly there is in this instance an embodiment of an ideal equipment for the growth of such a fickle plant. There must have been many hundreds, if not thousands, of these chaste and wax-like flowers hanging at one time, and how long it had been so, or to what period of the future it would extend, it does not voluntarily occur to the visitor when allowed the privilege of an inspection of such a fine, natural picture. The plant itself is a living compliment to the gardener, Mr. Powell, and not less so to his foreman, Mr. Denny, who has had the charge of it for several years, much to his own and employer's satisfaction.—W. S.

# NOTES & NOTICES

## Journal of the Royal Horticultural Society.

Part 1 of the twenty-seventh volume of the above has been published, and contains a number of excellent and very useful articles on gardening, botany, and other cognate sciences by experts. The volume is well illustrated and contains some coloured plates illustrative of plant diseases.

## King Edward's Gift to Horticulture.

It is with the greatest satisfaction that we print the following letter, which we take from the "Times" of Thursday, October 16, our publishing day: "His Majesty the King, having heard of the project in hand, has commanded the following letter to be sent to Captain Holford, C.V.O., C.I.E., a member of the Council of the Society, enclosing His Majesty's contribution of 100 guineas to the fund:—

"Balmoral Castle, September 30, 1902.

"My Dear Holford,—The King has been much pleased to hear of the intention of the Royal Horticultural Society to commemorate its centenary in 1904 by the erection of a new horticultural hall for the use of the Society.

"I showed the King Sir Trevor Lawrence's letter, and His Majesty commanded me to tell you that he perfectly remembered having addressed the Society in 1890 as Sir Trevor states; and you are to tell him from the King that the words His Majesty spoke in 1890 he repeats now, if possible, with a stronger feeling than ever, not only of the desirability, but of the actual necessity of such a building as it is proposed by the Society to erect. Sir Trevor and the Society, the King commands me to say, have His Majesty's best wishes in their undertaking, and, as a small donation from His Majesty by way of showing the interest he takes in the Royal Horticultural Society, I am now commanded to forward you a cheque for 100 guineas towards the fund which is being raised for the new building.—Believe me, my dear Holford, very truly yours,

D. M. PROBYN.

"To Capt. George Holford, C.V.O., C.I.E."

"Subscriptions may, if desired, be made payable half at once and half at midsummer, 1903. Cheques should be drawn in favour of the Royal Horticultural Society, and crossed 'London and County Bank.' W. WILKS, M.A., Secretary.

"117, Victoria Street, Westminster."

## Prince of Wales and "The Hall."

Following the King's gift announced in the above paragraph, we learn from the "Morning Post," of Wednesday last, that the Prince of Wales has graciously contributed £50 towards the Horticultural Hall fund.

## A National Park.

What is described as a National Park, 108 acres in extent, was opened with no little ostentation and the gracious smiles of royalty on the 16th inst. The spot is the Brandellhow Estate, on the shores of Derwentwater, a scene of beauty, as all the scenes in Lakeland are. The movement is certainly deserving of praise, and the promoters deserve the thanks of the nation for their patriotic endeavour. But surely the opening of this National Park, 108 acres in extent, might make people think. It is but a mere clipping, less than a small farm, and hardly larger than a Highland crofter's holding. Is this the only strip of hillside in England which the nation can call its own? Is every mountain top in England, Scotland, Wales, and Ireland private property, from which an inoffensive tourist, seeking health and the privilege of looking upon the face of his native country, may be warned off by a gamekeeper? In the Scottish Highlands there are thousands upon thousands of acres of mountain to which the present possessors are said to have no better title than a Court of Session judgment settling disputes about "marches" among themselves or their grandsires. It is too late to assert the right of every Briton to the mere privilege of roaming these solitudes, and ascending mountains sacred to the red deer, the blackcock, and the eagle.—(The "Leeds Mercury.")

## Scottish Horticultural Association.

Members' subscriptions of 2s. 6d. for the current year are now due. All members who pay their subscription before November 1 are entitled to a season ticket for the Chrysanthemum Show. Members who have paid ten annual subscriptions may become life members by the payment of One Guinea.—W. MACKINNON, Treasurer, 144, Princes Street, Edinburgh.

## Birches Diseased in Epping Forest.

A peculiar disease has made itself manifest among some of the Silver Birches in Epping Forest, which have been attacked by a fungus growth. So far the mischief caused is not on the extensive scale suggested a day or two ago by a contemporary. There is no probability of Silver Birches dying out in Epping Forest, where they flourish in large and increasing numbers, especially in the direction of High Beech and Theydon Bois.

## Convicts for Road-making.

At the present day, in the southern States of North America they employ the convicts in gaol, or such as are able and only in for short terms, in building new roads or rebuilding old ones, and they find the system beneficial to the counties and to the prisoners also, who, by labour out of doors, acquire a vigour and strength and capacity for earning an honest living that they would not gain in the cells. This is said to save much money every year. It also helps to keep the tramps, who have a constitutional disinclination to hard labour, away from that section.

## Seeds and Plants for the Argentine Republic.

The importation of plants and seeds into the Argentine Republic is permitted under a special law of July this year, says "Commerce," subject to previous inspection, and to disinfection or destruction as the case may require. Regulations have been made which amplify the law, and from which it appears that Buenos Ayres is the only port at which such importations may be effected. Persons desiring to import plants or seeds are required to address a petition to the Agronomical Section, setting forth the name and address of the importer, the name and place of origin of the plants or seeds, the means of introduction and date of arrival, and the purpose and (if possible) the place for which the goods are intended.

## Californian Crops.

The weekly report of the U.S. Weather Bureau says that Grapes and late deciduous fruits have ripened rapidly in most places, and the crops are being gathered and cured as rapidly as possible. The fruit and Grape crops are remarkably heavy in nearly all sections, and in some places the largest ever raised, but owing to the scarcity of labour and refusal of some of the canneries to handle the fruit, there will be a heavy loss, especially of Peaches, which ripened rapidly. Raisin growers are said to be short of trays, and some of the Grapes will be sent to wineries. Present indications are that the Grape crop will be above average. Prunes are yielding heavily, but are small in size in some localities. Apples of excellent quality are plentiful. The Almond crop is unusually heavy. Citrus fruits, Almonds, and Walnuts are in good condition. Hops are yielding an excellent crop in the northern counties. Corn, Potatoes, Beans, and sugar Beets are doing well.

## Waste in Edinburgh Public Gardens.

A correspondent to "The Scotsman" writes as follows:—"May I, through the medium of your columns, draw attention of our City Fathers to what I think is a shameful waste in our public gardens of valuable plants, viz., Pelargoniums, Fuchsias, &c., which at this time of the year, when taken up to make room for spring flowers, are thrown into the rubbish heap. Now, instead of allowing such plants to rot, might I respectfully suggest to the Corporation that they would give instructions to their gardeners to send these plants, also any surplus plants that they may not require, to the Board schools to be distributed amongst the pupils, who, I am quite certain, would be delighted to have them. I would also invite ladies and gentlemen that have private gardens within the city and neighbourhood to send their spare plants for the same purpose. By so doing they would have the thanks of many school children." London parks always dispose of their bedding plants by free distribution.



**Appointment.**

Mr. C. H. Holloway, late head gardener, Kilmeston Manor, Alresford, as head gardener to the Right Hon. Lord Aberdare, Longwood, Winchester.

**Horticultural Teaching in Scotland.**

The Dundee and Broughty Ferry district (Forfar) have taken the lead for years past in providing instruction in horticulture by means of lectures. The first of a course of lectures under the auspices of the Technical Education Committee and the Dundee Horticultural Association was given in the Grove Academy on the 15th inst. The lecturer was Mr. Robert Dow, Longforgan, who had for his subject "Our Common Mushrooms, and How to Know Them."

**A Nursery Decision.**

The following note from the American "Florists' Exchange" is interesting:—"At San José, California, the superior court recently rendered a decision and judgment, which makes it obligatory on a nurseryman to sell fruit trees that will grow, bear fruit, and approach a general standard. About a year ago, L. P. Brackett, a fruit grower of Santa Clara County, bought some Prune trees of M. Martens and set out three acres. After three years of care and culture, the trees, which never had made but a moderate growth, died. Suit was brought against the nurseryman for damages, and the judgment rendered is for \$1,500. The suit turned on the word 'merchantable.' Expert testimony was furnished to show what a fruit tree must be to reach the standard expected by the law. The court decided that any person who is deceived into buying trees that only cumber the ground, but never thrive or bear fruit, is entitled to be recompensed to the actual amount of the loss sustained. The above clipping sets one thinking. The court's decision, inasmuch as it relates to a person's being deceived into buying trees, &c., is sound; but from what appears in the clipping it is not clear that the seller of the Prune trees deceived the buyer. That it took three years for the trees to die ought to be good proof that they were in a pretty good condition when planted. Too much depends on circumstances of soil, situation, moisture and general treatment, to make it safe for a nurseryman to obligate himself 'to sell fruit trees that will grow, bear fruit, and approach a general standard.'"

**Appointment to Mr. T. R. Sim.**

Mr. T. R. Sim, who was recently voted a grant of £250 by the Cape Government for a work on Forest Flora, is the eldest son of the late Mr. John Sim, Gateside, Strachan, Aberdeenshire. He received an excellent education at Aberdeen Grammar School, on the completion of which he obtained a splendid training in his adopted profession at Kew Botanic Gardens, London. About fourteen years ago he left Banchory, and was fortunate in securing an appointment as curator of the Botanic Gardens, King William's Town, where in the new field opened up to him he gradually acquired an extensive and varied knowledge of his pursuit as relating to Cape Colony. His work on "The Ferns of South Africa" is regarded as the standard work on the subject, and many other valuable contributions, including a handbook of "Kaffrarian Ferns," have earned for him a high place in his profession. His latest work, the value of which as already stated, has been recognised in a tangible way by the Government grant of £250, is on Forest Flora, and is received as a valuable addition to the science. Some time ago he was given an Important Government appointment in the Forestry Department, where he gained great distinction, and was repeatedly promoted, and only recently the Government, which for some time has had under consideration the future management of the forests, and the laying out of new plantations in Natal, made an offer to Mr. Sim of the responsible position of Conservator of the Forests in Natal, and which Mr. Sim has now accepted. As a scientist, Mr. Sim has risen to a position of great eminence, and to-day is recognised as one of the foremost botanists in South Africa. He is a member of the Royal Agricultural Society, London; the Linnæan Society, &c. Before leaving for South Africa it may be recalled he was the jubilee gold medal essayist of the North of Scotland Horticultural Association. In South Africa he, at an early stage, was successful in winning the first prize for an essay on irrigation, being one of the series of competitions inaugurated by Cecil Rhodes, who was Premier at the time.

**The Scottish Heather in Canada.**

One of the most interesting emigrants from Scotland last year was a plant of Scottish Heather, transported root and branch with the object of founding a new colony in Canada. It was sent by Mr. Eliot, of Goldenacre, snugly packed in a special case with special precautions to ensure its safe arrival; and Mr. Henderson, the Town Clerk of Ottawa, who acted as emigration agent at the other side, now writes to say that the newcomer has justified its hardy upbringing. There need be no fear but the Heather will stand the rigour of a Canadian winter. It needs no encouragement.

**Begonia Flowers from Norwood.**

No firm in or around London has done more to exhibit the merits of the tuberous Begonia in its varied colours than Messrs. John Peed and Son, of Roupell Park Nurseries, South Norwood. During the week the Messrs. Peed sent to us a selection of blooms picked from plants grown all summer, and growing still, in the open. Even now, the third week in October, these flowers measure 5in across, are stout and dense in substance, smooth, even, and well opened, and, lastly, possessing remarkably fine colours. The varieties are orange, scarlet, white, crimson, pink, and salmon. The best effect with these is obtained by harmonising colours that are nearly alike.

**Orchards.**

To the townsman there is nothing about a farm of greater charm than the orchards, which are very beautiful when covered by their snowy blossom, and again, later, when drooping below a load of purple and golden fruitage. Few townsmen know how gloriously beautiful are the orchards of Somerset and Devon in late September, for few make holiday then; but those who do for once, have always in their memory pictures of heavy-fruited orchards, trees laden with fruit of rich red and gold, and heaps abundant beneath the old gnarled trees of ruddy glowing Apples, like sparkling fires among the grass. It is generally granted that fruit trees are ornamental as well as useful. Could they not be planted more frequently in shrubberies?

**The New Riviera.**

Messrs. Elder, Dempster, and Co. have adopted the above heading in advertising their Jamaica hotels and the Imperial Direct West India Mail Service, which the firm established at the beginning of last year. This title for Jamaica is likely to attract attention from those in the habit of visiting the Riviera, and a change of programme for the winter and early spring months would be found beneficial to frequenters of "the sunny South." Too much is not claimed by any means in the classification, by name, of the beauties and health-giving properties of Jamaica, for that land of bright sunshine in the Caribbean Sea provides the most marvellous and beautiful scenery, and every shade of climate that man can desire. In lieu of the pretty villas of Italy which dot and relieve the landscape, the picturesque homes of the planters beautify the scenery of Jamaica. The new portion of the Constant Spring Hotel is to be opened December 1 with a garden party and other entertainment.

**Notes from Beaulieu, N.B.**

The weather here is very much of a piece with that of the southern counties. The difference in latitude in no appreciable degree can be detected in any of the general forms of vegetation. There is, however, one natural feature which excels immensely anything of the kind to be met with this season in the southern counties, namely, the autumn tints in the foliage. I, to-day, stood on a commanding eminence overlooking the mammoth building of Beaufort Castle, the seat of Lord Lovat. It lies on the banks of the river Beaulieu, in an extensive basin, probably, where in former ages the waters of the Firth of that name lashed their waves against the encompassing walls of Nature's munitions. This extensive, undulating area is more or less covered with forest trees, comprising all kinds, and consequently all shades, from the deep red of *Cornus sanguineum* to the soft primrose of the weeping Birch and emerald green of *Quercus*. I do not remember of ever seeing a more pleasing prospect, and truly a visit to this part of the Highlands is worth the expense and time it entails.

## Botanic Gardens.

In reading the history of botany and gardening, we are struck with the quaint ideas which first prevailed regarding plants and their uses, especially those used in medicine. Both gardening and botany, we learn, had very small beginnings. The former was merely the cultivation of such plants as were found wild, and snited either as food or clothing for man. Botany began to be studied by the old physicians, who used many plants in their prescriptions. History, however, gives us no idea of the number of victims who succumbed to their crude experiments, not to mention the many superstitious notions regarding their virtues or properties. The herbalists (and they are not yet extinct) considered that every plant was created for man's use, either as food, fuel, medicine, or manufactures; hence it is quite easy for us to conceive how these plants, when their uses became known, should be cultivated. Those yielding fruit, food, &c., fell to the lot of the farmer or husbandman, and those which were used in medicine were grown by the physician or apothecary.

Some of the old historians were learned in many subjects, from medicine to astronomy, or they might also be Governors of provinces, and they mostly copied the writings of their predecessors, especially those of Dioscorides, who was probably the earliest botanist recorded in history. Some of his MSS. books

Britain. Some of these were cultivated by the monks in the grounds attached to monasteries for medicinal purposes, or as pot herbs; and, strange to say, many of these plants are still to be found, more or less naturalised, near these places, or where they formerly existed.

From these small beginnings, the monks soon planted vegetables and fruit trees, which were looked after by the inmates of those places. The knowledge of the use and culture of these plants soon spread to the people of the neighbouring cottages, and were grown by them. The most ornamental plants were cultivated also for their beauty, but as our subject is concerned with botanic gardens, we must leave the history of gardening to the interesting writer of the articles entitled "Old-time Gardening," which are appearing in this journal.

While ordinary gardens are concerned with the use and beauty of plants only, or in the case of public parks and recreation grounds for showing individual plants, or the massing of them for effect, the botanic garden has for its primary aim the promotion of botanical science, by collecting as many plants as possible from all parts of the world, and finding means for their proper growth, such as plant houses, warm water tanks, rockeries, and, in many cases, by supplying special kinds of soil, as peat, limestone, clayey soil, sandy soil, or sea sand for them. So far as possible plants that are allied should be planted near each other to show their relationship; or they are sometimes grouped together according to their uses, structure, or geographical distribution.

Botanic gardens, or as they were formerly called, physic gardens, are of comparatively modern origin, and, like the science itself, owes their birth to the needs of pharmacy. Thus, at the earliest European school of medicine, that of Salerno, in Italy, we find a record, in 1309, of the medical garden of Matthæus Sylvaticus; while in 1333 a similar garden was established by the Republic of Venice. Many similar gardens, public and private, were established in the next three hundred years. The first three public botanic gardens of which we have records were established in Italy; the first of these at Padua in 1533, that of Pisa soon followed, and that of Bologna, established in 1547 by Luca Ghini, that he might grow the plants required for teaching purposes. Luca Ghini was also the first public professor of botany.

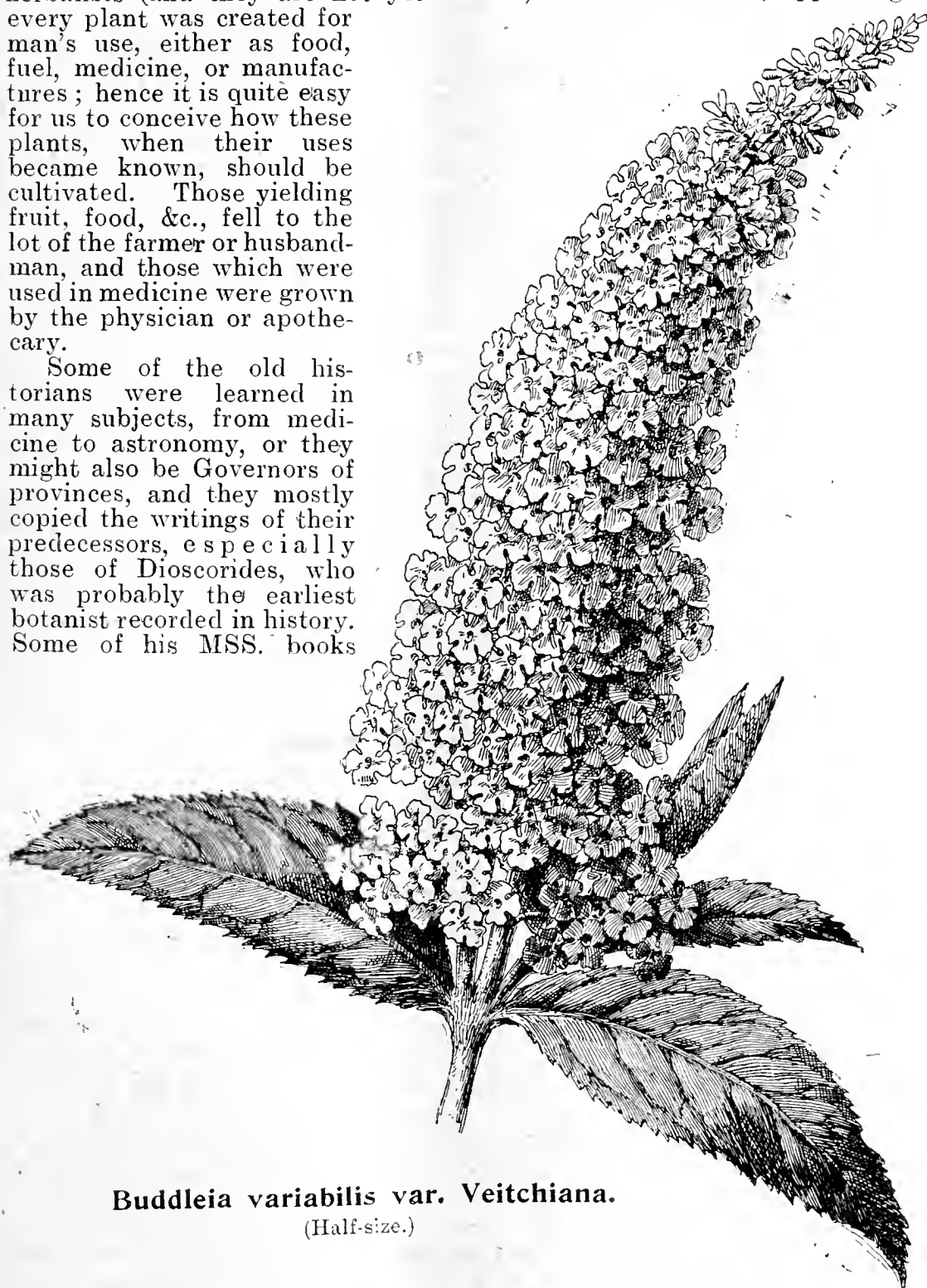
I will now give the dates when some of the principal botanic gardens were established:—Zurich, in Switzerland, 1560; Paris, 1570; Leyden, 1577; Leipsic, 1580; Montpellier, 1598; Copenhagen, 1600; Jena, 1628; Oxford, 1632; Chelsea Physic Garden, 1673; Edinburgh, 1680; Kew, 1760; Cambridge, 1763; Trinity College, Dublin, 1786; Glasnevin, 1798; Liverpool, 1803; Ceylon, 1811; Belfast, 1830; St. Andrews University, 1889; Yorkshire College, Leeds, 1896; and Aberdeen, 1899.

The Paris Botanic Garden was founded in 1570 (or 1597?); but at first it is said only with the petty aim of varying the bouquets worn at

Court. In 1626, however, its scientific purposes were defined, and in 1635 professorships of botany and pharmacology were founded, which soon made it famous as the Jardin des Plantes. A further impetus was given by the popularisation of botany in the eighteenth century by the great Linnæus.—ALBERT HOSKING. (To be concluded.)

### BUDDLEIA VARIABILIS var. VEITCHIANA.

This new variety was exhibited by Messrs. J. Veitch and Sons (Limited), Royal Exotic Nursery, Chelsea, S.W., on August 18, before the Floral Committee of the Royal Horticultural Society, when a First Class Certificate was accorded. The dense thyrsoid inflorescence is coloured bright heliotrope, being quite 3in through at the base, and 12in to 15in long. Our illustration depicts the variety a little over half natural size. It is a very handsome new Buddleia.



**Buddleia variabilis var. Veitchiana.**  
(Half-size.)

are still in existence, the most celebrated of these being in the Imperial Library of Vienna, and from which plates were prepared, but two impressions only appear to have been taken off. One of these was sent to Linnæus, and is now in the library of the Linnæan Society of London, and the other to Sibthorp (either as a loan or gift), who was at Oxford in his preparation of the Flora of Greece, and that copy is now in the library of the Botanic Garden, Oxford.

Throughout the Bible we read of vineyards and gardens, so that gardening is very ancient. The Arabs were great physicians, and much versed in the medical properties of plants, which knowledge soon spread to Greece and Italy and other countries bordering on the Mediterranean, and gradually spread northwards to France, Germany, and Holland, and finally reached this country. Many of our cultivated plants, and some of the weeds of our hedgerows, were brought by the Romans when they invaded Great





### Some Pillar Roses.

Of the Waltham and other climbers I promised to say a word or two. They are well worth a place. No. 1 produces some beautiful blooms of good shape, but not very many of them. No. 3 is similar, but the flowers are darker, and the leaves are a beautiful purple colour in the spring. It does not grow quite so strong as No. 1. Madame Alfred Carrière is a good white, a very free grower, producing beautiful blooms, which are large and very fragrant. It does not flower as freely as do many of the Noisettes.

A Rose somewhat similar is La Biche. The blooms, which are pinky-white, are not so large. The flowering shoots are pendulous, which gives the plant a graceful appearance. Céline Forestier, an old Rose, but a very good one, a pale yellow, a free bloomer, and very hardy. This is an old favourite of mine, being the first climbing Rose that I had to attend to. It was trained over a wooden trellis against a high wall, and produced a large quantity of its beautiful blooms.

Euphrosyne, the pink rambler, produces clusters of small flowers, but they do not last very long. The plant does not grow so strong as its crimson rival, and does not favourably compare with that Rosa. I think the same may be said in respect to Aglaia, the yellow rambler, and Uralia, the white rambler, although I have not grown the two latter.

Rêve d'Or is a strong growing Noisette, producing very nice shaped buds and glossy foliage. It makes a good pillar Rose. In William Allen Richardson we have a general favourite, the colour, orange-yellow, and the size of the flower, making it an ideal buttonhole variety. It is more grown upon walls perhaps than pillars or arches; but it is also suitable for the latter purpose as well. Amongst single flowered section, Paul's Carmine Pillar is one of the best. It is very hardy, a strong grower, and produces beautiful blooms of a bright rosy carmine. The foliage is bright and clean, and, under liberal treatment, strong shoots are annually produced. Unfortunately the flowering period is short, but its other good points will make up for this. It is worth a place in all collections of pillar Roses.

A good companion to this is Paul's Single White. The flowers are large, white, produced rather freely, and remains in bloom much longer than Carmine Pillar. Its habit, however, is not so good. The Ayrshire Roses also make suitable pillar Roses. They are all very hardy and free bloomers; the flowers are produced in large clusters. Bennett's Seedling is a small double white; Dundee Rambler, semi-double white, with pink edges; Splendens has larger flowers of a flesh colour; Ruga is similar, with paler coloured flowers. These are all good varieties. This list does not by any means exhaust the number of Roses that may be used for pillar work. Those enumerated will generally be found satisfactory, and may safely be given a trial.—J. S. U.

### Nursery Specialities.

In extensive nurseries one expects, and often can find almost anything that may be wanted in the matter of plants; yet while this is true, specialities of some kind is now made the staple of most business houses in these days of progress and keen competition. In the neighbourhood of Bristol, namely, Westbury-on-Trym, Messrs. Isaac House and Son have familiarised their name by their association with Violets, Sweet Peas, and herbaceous plants, Polyanthus, and Violas. Being much interested in this sphere of horticulture, and having seen some of the fine displays made by Messrs. House, I made a point recently of calling on them to see this "home of flowers," a term aptly descriptive of their nursery.

Of Violets the present is not perhaps a time when much may be said, except that a great variety—indeed, all the most deserving and best among old and modern kinds—are represented in varying stages of growth, and in numbers amounting to something like 40,000 plants. Some new

houses are erected for planting a good number of the double flowered kind, and which it is said answers the purpose admirably. The structures are of the usual ridge and furrow type, with open sides admitting a current of air passing through the whole width, and abundant provision is also made for roof ventilation. The beds are raised so that the plants obtain a maximum of light and air, without which they could not succeed in winter.

Pentstemons and Phloxes gave the greatest wealth of colour at the time of my visit, and these were indeed fine, both in plant, colour, and variety. For grouping in beds or as isolated plants in the front of herbaceous borders, these Pentstemons would be a telling flower for the late summer and autumn months. The spikes are robust, and the individual bells of immense size, while the colours are both varied and striking. A few of the best are Miss Wilmott, Jean Mace, Jane Misme, Dragoon, Gabriel Barde, Andre Lebon, Commandant Larmy, Capt. Marchand, Dr. Chantelesse, Lady Brodie, Lord Lister, Phryne, Talma, and President Carnot. These were hosts of others, but no useful purpose would be served in repeating names.

Perennial Phloxes were grand in colour and truss; the best were W. Robinson, Pantheon, Miss Pemberton, Matilda Seras, Lord Rayleigh, Le Cicle, Fiancée, Etna, Coquilicot, Brilliant, Albatre, Adonis, and Cœur de Lyon. Two seedling whites of Messrs. House's own raising are of great beauty and dwarf habit, named respectively Esme and Viola.

Delphiniums are another speciality occupying much space, and affording an agreeable change and contrast to the bright colours of the Phloxes. Here again are much variation of colour, but the finest of all is Persimmon, a new and very striking flower. Belladonna is another lovely variety, sky-blue in colour, with a free branching habit. Of dark colours, W. B. Child, King of Delphiniums, Sir J. Forest, and Sir Walter Scott were noted as being extra good.

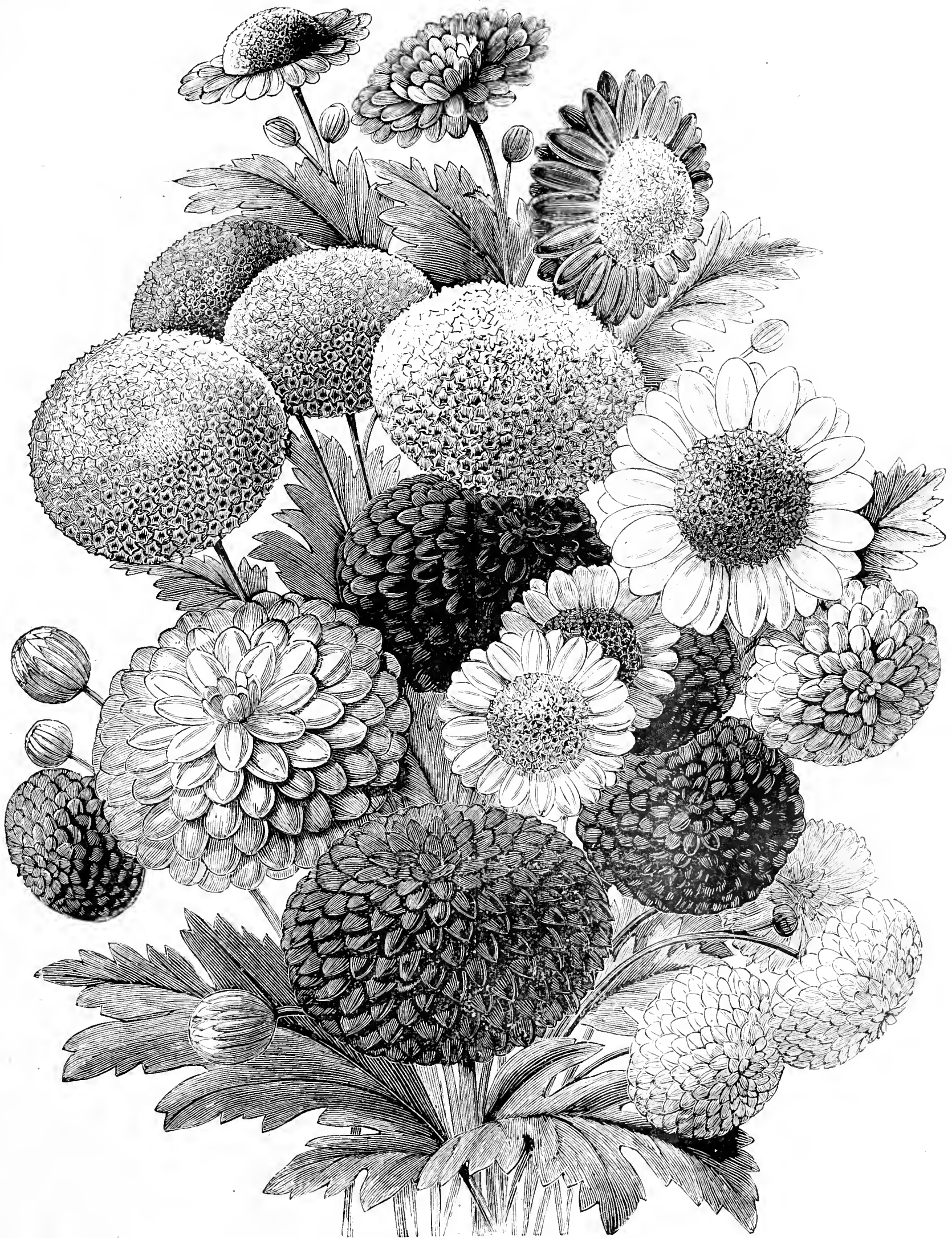
Chrysanthemums, maximum and latifolium varieties, are represented in almost bewildering numbers, varying not in colour, but very much in character of flower and habit of growth. Li Hung Chang and Shasta are two of the most recent introductions, being remarkable for their individual size. Margaret Marwood is a dwarf growing kind, and perhaps the freest blooming plant in the whole collection. Laciniata, Robinsoniana, Mikado, W. H. Gabb, Snowflake, Countess Cadogan, Grandiflora, Triumph, and Magnificum are some extra fine.

Pyrethrums and Gaillardias are in much demand, and a supply of plants would appear to be grown to meet it, and the numbers of these in variety are almost endless. Michaelmas Daisies (Asters) are represented by no less than 120 kinds. Polyanthus and Primroses, double and single, are grown and flowered by thousands, as well as other rare species and varieties, including the curious Hose-in-Hose and Jack-in-the-Green.

Sweet Peas, which are grown for the dual purpose of exhibition and seed production, Messrs. House have given ample demonstration of their scope to deal with, and their skill as cultivators. Their exhibits have been remarkable for refinement and clearness of colour.

About 100 varieties of Fancy Pansies are grown, and a great number of Violas, which, judging by the vigorous growth and wealth of flower, find a congenial home here. Carnations and Pinks are other specialities for which a good demand exists, and in these, as with other flowers, the Messrs. House devote time and study in obtaining improvements of their own by hybridising. A fine yellow border Carnation named Huntsworth is a good non-splitting, clear coloured flower that should have a future before it, and particularly as good yellows are by no means numerous.

Besides the foregoing specialities in flowers there are a widely differing assortment of herbaceous plants suitable for border planting and cut flower purposes. Chrysanthemums, too, of the early outdoor section are represented by the best and most select, particularly of those bearing large flowers. Rock and Alpine plants are numerous, such as Sempervivums, Saxifrages, Sedums, Aubrietias, Silenes, Veronicas, Phloxes, double flowered Arabis, and Rock Roses. These are a few among the many varieties adapted to this interesting phase of garden work. Much more might be written of the interesting things to be found in this rural nursery, but sufficient has been said to show that popular flowers are those favoured by the Messrs. House.—W. S.



POMPON CHRYSANTHEMUMS. (See page 378.)





### Newton Wonder Apple in Kent.

I notice that in a reference to this fine Apple it is stated that it does not succeed in Kent. [The reference should have been better qualified.—Ed.] Newton Wonder succeeds admirably. I know many instances in which it is represented, and growers generally speak highly of it. Mr. Bunyard, Maidstone, in his catalogue speaks of it as being "One of the best among recent sorts," and he would not be likely to do so unless it succeeded in Kent. Some of the best examples I know grow in the somewhat retentive soil in the Weald of Kent, and I can hardly believe that Newton Wonder could possibly succeed better than it does there.—G. H. H.

### The Gardener's Position.

Changes everywhere! Nature herself is now preparing to put on her winter garb, changes in gardens, change of master, change of man, horticulture generally undergoing an upheaval, causing some to doubt if the private gardener in the future will really exist! Still, on the whole, the trend of things is towards a higher standard—greater cultural skill shown, in spite of croakers of the old school, better taste exhibited in the discernment of form and colour, and, it must be admitted, too, a better class of men employed generally in the sphere of gardening. To many it brings a note of sadness, as all changes usually do—sad, because the brightness of summer has faded, and the winter of the future for them, although buoyed with hope, is full of uncertainty and apprehension. It is very questionable if the life of the gardener of to-day, in spite of his immense advantages over his predecessors in ways and means, is cast in as pleasant lines as was their's. The hurrying, scurrying, irritable spirit of the age is as much a reality to him, although far removed from populous centres, as it is to the toiler in the great cities. True, he has that around him to delight both ear and eye, which the latter has not, but the petty annoyances and indignities to which the average gardener is subjected, and which appear inseparable from domestic service, and which, unlike the artisan or trade grower, he cannot resent; coupled with the precariousness of his position, and the possibility of being out of permanent employment for several years, more than overbalance the fact that he is not a pecuniary loser by a bad or indifferent season. Had he to face the question of profit and loss in addition, his life, indeed, would not be worth living.

Undoubtedly, there are employers who look on their domestic servants as human beings and fellow-men, and not just simply instruments to minister to their pleasure; but those best acquainted with service know that, although the feudal system no longer exists, the spirit of it is as rampant as ever. As "G. H. H.," page 349, pointed out last week, the gardener is not a "unit in combination to accumulate wealth;" therefore, is not entitled to fair treatment. It is only the man who acquires wealth, or who can place money, the spending of which he is entrusted with, in other's hands, who is entitled to any consideration whatever from any quarter. It would be absurd to expect anything different. If a man can neither spend, for lack of possession, nor dispense money, for the reason that he does not happen to be entrusted with any, what earthly good can he be?

So argue our smart business men, and undoubtedly right, too, from their point of view. Can we expect that, with the advent of the woman-gardener, who, we are told, has come to stay, if not actually usurp the "mere man" gardener, matters will improve in this respect? Probably we may find that, in addition to horticulture, she will be giving her wealthier sister, in whose employ she may happen to be successful, lessons in those qualities of heart which go to make up a lady.

Many an unfortunate male practitioner, forgetful of all usurpation, will here exclaim: "Alas! might these things be!"

The boys of the bothy, too, are anxious to know more of the general drift and ultimate position of the lady gardener, and to know as well "where they will come in" if "mixed" bothies are to be a feature of the gardening of the future; but to a suggestion that the associations of such might improve their manners, proclaimed, in professional pride, that their's were above reproach, and to another, respecting the advisability of developing their power of observation, said it wasn't their fault if the whereabouts of the boss was unknown to them!—G.

### Perpetual Fruiting Strawberries.

I have been anxiously waiting for a further report on the above from "W. R. Raillem," and am glad he has gone back to his old love St. Joseph. I think that attention is much better placed on St. Joseph than on St. Antoine de Padoue, which is found to be a poor cropper, and has coarse-looking fruit, and wanting in flavour in my district of Lincolnshire. I was induced through "W. R. Raillem's" first article, recommending St. Joseph, to try it, and find it a continuous and good cropper, of fair quality, and of medium size. At the present time (October 17) there is a good crop in various stages in bloom, also green and ripe fruit. It may interest "W. R. Raillem" to know I have anticipated his suggestion, and have raised a number of seedling St. Josephs, and consider some of them are improved forms, having larger and better shaped fruit. I have other seedlings, not St. Josephs, which are now producing fruit freely in the open.—W.

### Gardeners' Education.

As a young gardener, it is with great interest that I devote a few moments weekly to follow the opinions of a few of my brother horticulturists respecting the already "much-worn" subject of the young gardeners' education. I venture to ask: Which of the worthy chiefs are we young gardeners to follow? He who preaches Shakespeare and university education with a loud voice, and passes over such small items as the proper use of the spade and grape-scissors; or he to whom these "small items" are indispensable, as the only sure basis of a source wherewith to obtain young yet perfectly capable fellows, in whom the love of their profession is their first thought when dawn breaks, and not unseldom their last in the evening? This leaves little or no room for studying the immortal Shakespeare. Each would, and, in fact, does score in their own way, for do we not hear on the one hand: "Splendidly educated that young fellow is, you know, but he's not worth his salt." "Why?" "He can't thin me a bunch of grapes." And, vice versa: "That fellow is worth his weight in gold, but (and this is added, as it should be, reluctantly) his manner, especially when addressing his superiors, is, to say the least of it, a little below that standard of efficiency which to the twentieth century gardener is indispensable."—H. T.

### Gardening Panaceas.

We find that credulity is not unknown in the courts of horticulture. Every gardener is well aware of the many cure-alls which presume themselves upon his notice. They are not, perhaps, legion, but still they come, and it is very questionable what they will not be before the present century is completed. Like the vendor of pills, tinctures, and syrups, the vendor of plant medicine has in his ample cornucopia an antidote for all the ills of plant "flesh." Of course, the wise gardener will be on the alert for the many-sided man, and safeguard against his intrusion into his province. Unfortunately, however, gardening has proved a somewhat lucrative field for the operations of the panaceist. This is to be regretted, because of the superior tone of common sense, as well as intelligence, that marks the character of the average gardener. Though the mountebank, when he disposes his vapoury wares among a credulous people, in a measure encroaches on the province of the regular practitioner of medicine, he does not necessarily interfere with the medical man's reputation. It is not so clear that the same can be vouched as a plea for the gardener who has come under the spell of the panaceist. The medical man and the quack, it is true, are rivals—competing, as it were, in the same arena, and the dupes of the latter are those to whom very often both administer. The consequence of the labours of both may or may not be referred to either.

There is no such breakwater of irresponsibility to safeguard the reputation of the gardener. He alone becomes directly responsible for the impositions of the panaceist. If he makes a plunge for one or all of the multifarious nostrums for the benefit of plant life, and finds that a dose of common sense and fresh water would just as well suit the cases of nine-tenths of his patients, he surely must feel that his reputation is not on the up grade. We never thought much of the gardener who depends too much on the virtues of his bottles. Indeed, the man who uses them to any extent is perhaps scarcely worthy of the dignity of gardener. In our own experience we cannot say with sincerity that we ever yet came in contact with a plant remedy that invariably fulfilled the prescribed claims. We know only one specific remedy for plant ills—and it covers a very few—and that remedy is sulphur. Cleanliness and plenty of fresh air where possible are the best and only curative and preventive agencies to cope with disease; and, of course, when these are neglected, and a pestilence of mealy bug breaks out in a house, the cure then, be assured, is the agency of fire.—D. C.

## Ornamental Plants and Shrubs.

In the course of the lecture which he delivered at a recent garden party at Messrs. Pennick's nurseries, near Delgany, in the County Wicklow, Mr. A. D. Richardson dealt at considerable length with the employment of shrubs of various kinds for ornamental planting, and specially referred to the extent to which these might be availed of in setting off private grounds and homesteads. In his own experience he had found, he said, no group of plants so generally useful to the landscape gardener than hardy shrubs, whether evergreen or deciduous, and what with discoveries within recent years of new species, and the production of new forms by the cultivators and hybridisers, the gardener now had no lack of suitable material at his command. Still, he thought that the resources which planters possessed in this way were not utilised as fully as they might be—generally speaking. There was a great tendency to “ring the changes,” so to speak, on a few species and varieties, but there were not wanting at the same time signs of a good deal of change of taste in this respect, thanks to the influence of the horticultural press, through whose agency so many fine flowering shrubs have been brought to the notice of planters.

In the grouping of shrubs for effect in landscape and ornamental planting no hard and fast rule could be laid down. Hitherto the great mistakes made in this direction have principally taken the form of the employment of too few varieties of shrubs. By this he did not mean that too few kinds had been used in each individual instance, but rather that there had been too much repetition of the same kinds in every case. Yews, Hollies, and a few others often formed almost the stock-in-trade of some planters, while the fine flowering shrubs were conspicuous by their absence. Now, while no one can object to the judicious use of these plants, when they are employed too exclusively they produce a feeling of monotony or sameness in the different parts of a place, or in different places.

Again, too free use has often been made of the common evergreens. In small places where there is little scope for planting in large breadths evergreens must be largely employed, both for shelter and to produce seclusion; but in the case of large places there is no necessity for this. In smoky towns, too, some kinds of evergreens are too freely used. The evergreen character of a plant is due to its power to retain its leaves until the next crop has been produced, or longer. In some cases, as for example in the case of the common Ivy, the leaves are retained only until the leaves of the following year are produced, when they drop. In other cases, as in those of the Yew, the leaves persist over a number of years. Now, it is quite evident that shrubs which retain their leaves for a number of years must, in smoky towns, become very grimy and unhealthy, and consequently they look unsightly. Deciduous shrubs, or those which retain their foliage only for a year, have, on the other hand, a much more healthy and fresh appearance.

In town planting, where the air is loaded with impurities, great care requires, therefore, to be exercised in the selection of evergreen shrubs, and it is a great mistake to employ Conifers to any extent. This is, of course, a rule which cannot be rigidly applied, for, as we know, there are shrubs and trees of all kinds which won't tolerate a polluted town atmosphere. In the open country, where the air is pure, it is, of course, quite different, and there evergreens may be used as circumstances demand with the certainty that they will always be fresh looking, provided, of course, that the conditions as to soil, exposure and so forth, are suitable.

A great deal more might yet be done in the planting of fine flowering shrubs, both evergreen and deciduous. Of these we have now a great wealth, and a great proportion of them are sufficiently hardy for planting almost anywhere in the British Isles. But to show off fine flowering shrubs, at any rate of the larger kinds, to advantage, there is no better way than by planting either singly as specimen plants, or in groups of one kind. In such positions they develop in a perfectly natural manner, and they never require to be cut or pruned into shape; in fact, such a thing means mutilation when it is carried out systematically and vigorously.

Fine flowering shrubs grown in this way, and simply left alone, are far prettier and far more effective in ornamental grounds than when grown in any other way. But take, for example, the Rocky Mountain Bramble (*Rubus deliciosus*), a plant which does not seem to be very plentiful, but one

which has a great deal to commend it to lovers of flowering shrubs. What could possibly be finer than this plant grown in this way when covered with its large white Rose-like flowers? Or, again, take *Spiræa discolor* (better known, perhaps, as *S. Ariaefolia*). Grown in this way, few shrubs are more graceful or more effective. A large number of fine flowering shrubs, both deciduous and evergreens, lend themselves to this kind of treatment. Among them the following may be mentioned as worthy of attention:—

*Berberis Darwini*.  
*Genista aetnensis*.  
*Cytisus albus*.  
    *scoparius Andreanus*.  
*Caragana melauocalyx*.  
*Prunus triloba*.  
*Spiræa bella*.  
    *discolor*.  
    *Lindleyana*.  
    *Van Houttei*.  
Roses—*Lord Penzance's Briers*.  
    *rugosa*.  
    *pinpinellæfolia altaica*  
    and others.  
*Pyrus floribunda*.  
    *japonica*.  
*Amelanchier canadensis*.  
*Deutzia crenata fl.-pl.*  
*Philadelphus grandiflorus* and varieties.  
*Hamamelis arborea*.  
*Viburnum Opulus sterile*.

*Ribes aureum*.  
    *sanguineum* vars.  
    *Gordonianum*.  
    *speciosum*.  
*Diervilla florida* and varieties.  
*Olearia Haasti*.  
*Forsythia suspensa*.  
*Andromeda (Pieris) floribunda*.  
*Syringa chinensis*.  
*Ligustrum ibota*.  
*Buddleia globosa*.  
*Rhododendron cinnabarinum*.  
    *Thomsoni*.  
    *Catawbiense*.  
    *Nobleanum*.  
    *White Nobleanum*.  
    and of hybrids.  
    *Jacksoni*.  
    *Cynthia*.  
    *Empress Eugénie*.  
    *The Queen, &c.*

These are a few of the larger kinds, but they by no means exhaust the list. Of the smaller kinds many may be used for massing in certain sites, and there are also many genera to select from, such as *Cytisus*, *Cistus*, *Genista*, *Hypericum*, *Jamesia*, *Philadelphus* (Lemoine's hybrids and microphylla), *Skimmia*, *Spiræa*, *Tamarix*, *Andromeda*, *Calluna*, *Erica*, *Bryanthus*, *Ledum*, *Leucothoe*, *Rhododendron*, and *Veronica*. This is not, of course, the only way in which these plants should be grown. They may be used in a great variety of ways, but when isolated they show to much greater advantage than when in mixture with other kinds where, as in a plantation of forest trees, the struggle for existence setting in sooner or later, and the suppression of the weaker brought about.

There is another kind of shrub which is of great utility in ornamental planting, viz., the “rambling” or climbing shrub. It often happens that unsightly objects which cannot be cleared away have to be covered up by some means, and in such cases shrubs of this kind are invaluable. Some of them are very showy flowered, others have fine foliage. Among the ramblers may be placed first *Rosa multiflora*, and its form *Crimson Rambler*, perhaps the finest rambling Rose which has ever been produced. Then there are the double flowered brambles, *Vitis Coignetia*, a magnificent Japanese Vine which produces very large foliage, which takes on a beautiful purplish red tint in autumn; *Clematis montana*, a beautiful early flowering sp.; the Honeysuckles, yellow Jasmine, *Vincas*, and so forth. Then of those which attach themselves by root-like supports we have, of course, the Ivies, *Ampelopsis*, and, perhaps, the most tenacious of all, *Hydrangea petiolaris*. The following can be recommended as suitable for the various positions specified:—

### PLANTS SUITABLE FOR ROCKWORK.

Heaths and Ericas.  
*Bryanthus, erectus* and *empestriformis*.  
Dwarf *Rhododendrons* and  
    *Azalea amoena*.  
*Andromedas*.  
*Thuja aurea* and *elegantissima*.  
Bamboos (dwarf).  
*Cotoneaster horizontalis*  
    *thymifolia*.

*Daphne blagnayanum*.  
*Gaultheria procumbens*.  
Dwarf *Genistas*.  
Dwarf *Junipers*.  
*Lithospermum fruticosum*.  
*Pentstemon Menziesi*.  
*Polygala Chamæbuxus*.  
*Spiræas* (dwarf).  
*Veronicas* (shrubby, New Zealand).

### AUTUMN, WINTER AND SPRING FLOWERING SHRUBS.

*Hydrangea*.  
*Hypericum*.  
*Rhus*.  
*Jasminum*.  
*Daphne*.  
*Forsythia*.  
*Nuttallia*.  
*Calythanthus*.  
*Erica carnea*.  
*Magnolia conspicua* and others.  
*Hamamelis*.  
*Cytisus præcox* and *albus*.  
*Pyrus Cydonia*.  
*Prunus triloba*.

*Ribes sanguineum*.  
    *Gordianum*.  
    *aureum*.  
*Ledum palustre*.  
*Rhododendron præcox*.  
    *ciliatum*.  
    *dauricum*.  
    *Nobleanum*.  
    *Thomsoni*.  
    *Cunninghami*.  
    *Campanulatum*.  
    *Caucasicum*.  
    *Jacksoni*.  
    *Rhodora*.

### Chrysanthemums in London.

Two *Chrysanthemum* shows under the control of the London County Council opened on the 15th at Battersea and Finsbury Parks, and will remain open to the public for some weeks.



## Gardening at Wistow Hall.

Some gardeners are specialists, and they achieve success by growing a few things superlatively well; others have no specialities, but grow everything under their charge creditably; and a third, and very limited section, seem to possess the gift of branding everything they grow with the mark of a master hand. Mr. F. Clark, of Wistow Hall Gardens, near Leicester, seems to belong to the latter section. At least, that was the impression conveyed to me by a recent visit to the gardens he controls.

The Sweet Peas from Wistow have often been described during the past season, as they have won high honours at the principal shows. I can well understand this when I saw the plants, for although the flowering period was practically over the grand growth still remained. The clump system of culture is adopted. These are planted a yard apart, and each contains five plants. One would think from appearances that there were twenty plants to each clump judging by the great number of grand strong growths, in many cases 12ft in height.

In the kitchen garden splendid produce met the eye at every turn. The Celery was large, strong, and healthy, and ready for the final earthing. Leeks showed great promise, zine tubes having been used during the process of earthing. Two fine rows of Peas proclaimed how difficult it is to find a better variety than Autoerat when it is well grown. Brussels Sprouts were giants for size and sturdiness, and showed great promise of fine results in the near future.

The glory of the kitchen garden at the time of my visit—September 18—seemed to be a magnificent lot of Ailsa Craig Onions. These had been uprooted a few days, and were lying in full sunshine to ripen, precautions being taken to turn them over every day or two. I should not like to hazard a conjecture as to the weight of the individual bulbs, but collectively they were certainly the finest lot I have seen grown in a similar space. Trenching the land three spits deep very year, and using a very liberal allowance of farmyard manure, are the main cultural practices upon which Mr. Clark builds his success; and, indeed, deeply working the soil has produced a striking effect upon the produce of the whole garden.

In the vineries were many large, handsome bunches of Madresfield Court Grapes; perfectly "finished" Muscats in the same house were also large and shapely in bunch, only wanting a little more of the amber tint [which has been so seldom seen this season.—ED.] to make them perfect. Considering, however, that they have been grown in a house where Madresfield has coloured splendidly, this must be regarded as a fine achievement in Grape growing, as Muscats require much more heat than the popular black Grape above mentioned. I noticed several standard Apple trees carrying very fine crops, as a result of judicious thinning of the branches and root-pruning.

Chrysanthemums are now claiming a large share of attention. The plants are taller than usual, but look particularly strong and healthy, and as they have had full exposure, the wood should be well ripened. The vagaries of the season have had a somewhat peculiar effect upon some varieties, which were stopped when about 9in in height. From that point they have grown continuously without having made a break or a bud until the beginning or middle of September. Mark Firth, Esq., and Mrs. Firth have every reason to be proud of the fine condition of their gardens, and of the achievements of their gardener.—H. D.

## Gadding and Gathering.

Messrs. Bull and Sons, Chelsea.

The establishment of Messrs. Bull and Sons, at 536, King's Road, Chelsea, is mainly reputed for novelties and rarities in tropical exotic plants, and the collection is worthy of anyone's time to go and inspect; but, besides new or lesser known stove plants, one may also mention hybrid Orchids, in considerable variety and numbers, Bromeliads, economic plants, and especially Fuehsias and Zonal Pelargoniums, each of which form important sections of the firm's trade. Probably no other nursery contains the same variety of economic plants—plants cultivated on an agricultural scale in one part of the globe or another for the food supply of mankind, such as Cacao (or Cocoa, as we English wrongly name it), Coffea, Chinchona, Anonas, many rubber-yielding plants like *Hovea braziliensis*, *Kieksia elastica*, and Castilios, and other tropical genera needless to detail.

The present notes are descriptive of a very few meritorious plants, which someone, with an interest in tropical and temperate exotics, may find useful. The beautiful *Cestrum elegans*, with clusters of bead-like pink flowers, is an admirable pillar plant for a temperate range or corridor; perhaps the yellow or orange *Cestrum*—*C. aurantiaca*—is less familiar in gardens than *C. elegans*, and, moreover, the generic name *Habrothamnus* is more generally employed than that of *Cestrum*. By frequent syringings with warm, soapy water, these very beautiful plants can be kept quite clean. A new comer in the line of "foliage plants"

is found in *Dianella tasmaniana* variegata, which may most fittingly be described as a pigmy representative of the New Zealand Flax (*Phormium*). The sideways manner of growth is a character, as also the flat, blade-like leaves, which are of the same consistency as those of the *Phormium*, and far more deeply and beautifully variegated with orange-yellow.

Another variegated plant is *Tradescantia regina*. It is larger in growth and general character than those usually seen in gardens, colouring most brilliantly and well defined. For the edge of stages or on rockeries indoors this handsome and easily-grown plant commends itself. As a hall plant, where cold draughts are excluded, the very elegant *Jaearanda elegantissima* merits a place, and I am not acquainted with a more suitable decorative plant, which is at once so serviceable and elegant for this purpose.

A note must be spared for the following subjects with coloured foliage, namely, *Begonia President Boureuilles*, a larger and more effective foliage-Begonia than *B. margaritacea*, the well-known purple-coloured stove species. In *B. President Boureuilles* there is a shimmering metallic lustre over the very deep purple-red, and a noble plant it makes. *Draeena* (or *Cordyline*) *terminalis* is much grown, but the variety *Mayi* is superior as a colouring plant, and seems also neater in habit. Messrs. Bull have some shapely samples in 5in and 6in pots. *Maranta picta*, *M. insignis* (new), and *Panax Victoriae* are stove plants of exceeding beauty, and all introduced by the firm. *Croton Reedi* and *Draeena Victoria* are irreproachable, and the latter is unexcelled for winter use as a golden variegated and large-leaved decorative plant.

*Polypodium ericoides ramo-eristatum* is a Fern of dwarf stubby growth, much incised and crested at the tips of the fronds. *Platynerium Veitchii* furnishes one of the most elegant of the Elk's-horn Ferns, the drooping segments of the stems being covered with a silvery-grey pile of fine hairs. *Licula Muelleri* resembles *Rhapis flaxelliformis*; *Aralia triloba* is a South Sea "islander," deserving a paragraph all to itself; *Polypodium conjugatum*, an entirely new and distinct species, which will assuredly make its way to many collections; *Asplenium marginatum*, very pale green in colour, with handsome fronds of tender structure; and lastly, for the present, *Eugenia myriophyllum*, a graceful, shrubby little novelty, with abundance of dark green linear leaves, are each worthy of attention.—WANDERING WILLIE.

## DOCHFUR, INVERNESS.

Dochfour, the property of J. E. B. Baillie, Esq., lies five miles N.W. of Inverness, on the north side of Loch Dochfour. The gardens and grounds stretch along the loch in a strip about half a mile long, by one-third of a mile wide, lying between the loch and the hill. Being on a slope, they are terraced round the house and for the croquet lawn and Italian garden, the rest following the natural slope of the ground. The garden is sheltered from the north and east by the hill, lying in the loch, which is never frozen, the climate being remarkably mild—14deg. was the hardest frost last winter—and shrubs and plants will grow with very little protection, though they will not succeed in the Midlands in England. The west front of the house is covered with *Ceanothus Gloire de Versailles*, and the gardener's cottage has *Magnolias*, *Choisya ternata*, and *Azara* growing on it and flourishing, with but a slight protection of spruce branches in winter.

The terrace is planted with *Cannas* in variety, *Gladiolus*, fibrous rooted *Begonias*, and *Pelargoniums*, all of which do well. The vases were last summer alternately filled with *Cannas* and variegated New Zealand Flax, and the general effect was wonderfully good and sub-tropical. There is a very good and well grown collection of Conifers, said at one time to be the most complete in Scotland. It has of late years got a little out of date, but Mr. Baillie is planting largely, and the young trees promise well. An orchard was planted last autumn, on the model of those in Kent and Surrey, and looks well. There is a good, though not large, kitchen garden, the borders of the different plots being fenced with espaliers, and planted with a good collection of herbaceous plants.—J. T.

## PEAR, MICHAELMAS NELIS.

Our illustration of this Pear on the opposite page defines its natural size and form. The skin is thin, firm, of a bright greenish yellow, with minute brownish specks. Eye prominent, level with the rounded top of the fruit; the segments remaining distinct and generally evenly outlined. Stalk long, narrow, somewhat curving. Flesh pale tea-coloured, very juicy, melting, and richly flavoured. The tree is a free grower and bearer, and was introduced to commerce in 1901 by Messrs. George Bunyard and Co., the Royal Nurseries, Maidstone, who found it by chance in a cottager's garden. It is a seedling from the well-known Winter Nelis. An Award of Merit was given to it on October 7, 1902. It succeeds best grafted on the Quince, and is in use during September and October.

## Possibilities of the Australian Fruit Trade.

Apples of excellent flavour and of enormous size grow to perfection in several of the States of Australia. Indeed, there are districts in most of them, in which attention might most profitably be directed to fruit culture. Till very lately Australia has been the very ideal of a happy-go-lucky land. Gold has laid on the surface, flocks of herds have increased and multiplied, and the earth has yielded her increase so lavishly that the colonist has grown to think that his responsibilities were limited to a very casual planting, leaving to Providence the watering and general supervision of his crop, as well as the final increase. The writer has seen the banks of a river bordered all along with Peach trees, which have planted themselves from the fallen fruit, without any attention. Those Peaches which the pigs could not reach, or shake down, were packed in boxes and sent to the towns. Only quite lately have the several Governments awakened to the fact that some little knowledge is desirable in agriculture, and experts have been engaged to travel through the States and instruct the settlers how to obtain the best returns from their crops.

Fruit culture has, until lately, received much less attention than its importance has merited. Imprimis there was the difficulty of obtaining suitable land near the large towns, and in a new country means of transit were necessarily expensive and inadequate, thus much of the most perishable fruit reached the market in unsaleable condition. Again, no discrimination was exercised in the selection of varieties of trees suited to the conditions, climatic and topographical, or to the taste of the consumers, and little care was exercised in picking or classifying the fruit, still less in packing. Experts are well aware that different varieties of Apples and other fruits ripen in varying ratio, and such should be separately classified and packed, otherwise those which ripen more quickly will over-ripen and deteriorate the rest. Another frequent error has been that fruit has not been allowed to cool for sufficient time to get rid of the heat absorbed, and thus when packed in cases the warmth evolved has adversely affected the fruit and ripened it too quickly. Cuttings of fruit have been carelessly imported from Europe and America, which contained insect pests. In the congenial climate, and with the fecundity which characterises all animal life in Australia, these multiplied so rapidly that whole orchards were destroyed, and in one noted fruit growing district of New England many orchardists were reduced to the verge of bankruptcy. Now,

the most stringent regulations are enforced in all the States against the importation of diseased fruits or scions. With the "lasser-aller" distinctive of the settler these drawbacks were sufficient to deter many from fruit growing.

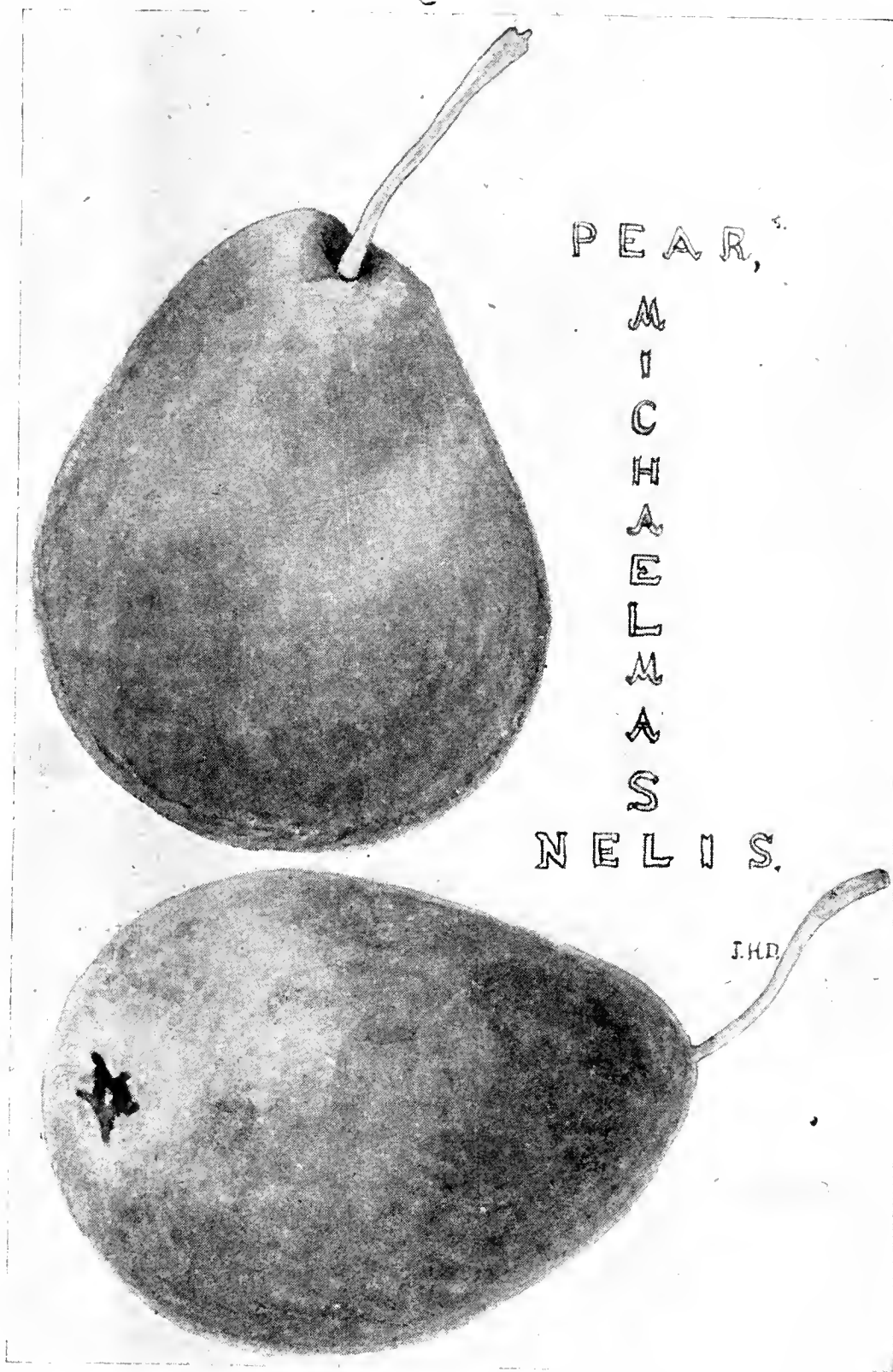
At the present time conditions are entirely different. Experiments have demonstrated the best kinds of fruit to cultivate. The Victorian Acclimatisation Garden alone is said to have 700 varieties of Apples and 400 Pears; whilst 20,000 scions of fruit have been distributed annually to members. Till recently, also, the outlet for orchard produce has been limited to the inter-State supply, and the production

has so far exceeded the demand that jam factories and cider making have absorbed much of the fruit. Now that the White Star line, which has done so much for the development of Australia by cheap freight and passenger facilities, is running a regular service, with every appliance for the carriage of fruit, and the Alfred Holt line are also carrying regular consignments, Australia has an opening for a share in the fruit supply of the English market, which has an annual value of about £8,000,000.

With regard to the condition of the fruit sent to Liverpool by Tasmanian (and Australian) growers last April, of the seven thousand odd cases of Apples indented to Liverpool by the Medic, about one-third were by special request sent on to Liverpool from London by rail to catch the market. The fruit was in excellent condition and of fine flavour, and the prices, from 11s. to 14s., were considered very satisfactory. They were mostly rather small green varieties of Apples, and all, as remarked, from Tasmania. On the continent of Australia, many districts of New England, and the higher altitudes of Victoria and South Australia are admirably adapted for the growth of the finest dessert Apples. The soil is very rich, and the winter cold is sufficient to ensure the necessary time for the trees to remain dormant. Fruit,

grown with care on these ranges, will bear comparison with the best Canadian Apples. The mammoth fruit grown near Stanthorpe would be too large for export, as it would ripen unevenly; but Ribston Pippins, New York Pippins, Blenheim's, and "Alexandras," all popular varieties in England, could be cultivated with success and profit. Quinces, which grow luxuriantly in all the States, ought to carry well and yield a good return brought to Liverpool direct, as apparently few, and those of the poorest, are brought here.

With regard to Citrus fruits, Oranges, Limes, Cumquats, &c., our market is pretty well supplied from the Mediterranean and California; still the Oranges of Queensland are of remarkable size and quality, the Blood Oranges and Navel Oranges especially, and the long time over which the crops



A New Dessert Pear, described on page 386.



extend make experts think that they could be brought over when our supply is lightest. Consignments sent to Vancouver arrived in A1 condition, and fetched good prices, this proving their carrying quality. The Pears of Victoria and Tasmania are of fine flavour. The question of tropical fruits must await the perfection of the new process by which it is mooted that perishable fruits may yet come to be carried long distances without depreciation. Pines, Grapes, Mangoes, Peaches, Apricots, Nectarines, Persimmons, Guavas, Custard Apples, and the Pawpaw, whose medicinal virtues make it so valuable as a cure for cancer and dyspepsia, all grow in Queensland in abundance.

It may be suggested that the manufacture of the Guavas and Quinces into paste, the Mangoes into chutney, and the drying of Apricots, &c., might be profitable. Dried Apricots, Raisins, and Currants have been brought to great perfection at Mildura irrigation fruit farm. Whether they could be produced cheaply enough to stand the freight in competition with the home market would have to be considered. Dried Bananas packed in wooden boxes like figs have also been prepared. They are not appetising in appearance, but very palatable. At present the abolition of black labour will leave many acres of land hitherto under sugar lying open for other cultivation; but this would only be suitable for tropical crops. In Victoria, land suitable for fruit growing is, just at present, to be had for very little cost. The unsettled conditions owing to the unequal pressure of the Federal tariff on different States, which has produced a non-progressive state of things for the present, affords an admirable opportunity for obtaining land under easy conditions. The problem of systematic fruit culture on a large scale is, with the present freight facilities, well worth consideration.—LIVERPOOL JOURNAL OF COMMERCE.

## Societies.

### United Horticultural Benefit and Provident.

The annual dinner of this society was held last Thursday, the 16th inst., in the Throne Room of the Holborn Restaurant, London, when 111 persons partook of an excellent repast. Arthur W. Sutton, Esq., V.M.H., F.L.S., admirably officiated as chairman, and was supported by a number of the leaders in horticulture from in and around the metropolis. An exceedingly interesting musical programme and demonstration of thought-transmission, or *clairvoyance*, was greatly enjoyed, and a number of toasts were accorded. The loyal recognisances were heartily responded to, and the chairman was closely followed during his speech on behalf of the society and its aims. Our leader is this week devoted to a consideration of the society's position, and the statements therein contained present a capitulation of Mr. Sutton's words. It is most satisfactory to learn that £20,000 are now invested, making £20 per member. The officers of the society are working their hardest to secure the enrolment of members, both honorary and privileged, so that the total of the former may be raised to 100, and that of the latter to 1,000, before the close of the year. A strong appeal was made to gardeners north of the Tweed, "who know a good thing when they see it," to give this benefit society their earnest consideration. It is a benefit and provident society for gardeners, and worked and sustained absolutely by gardeners, and no similar society in the United Kingdom is so healthy or so substantial, nor can show an investment of £20 per member. The officers, one and all—Mr. Hudson, as treasurer; Mr. Collins, as secretary; Mr. C. H. Curtis, as chairman of committee; and Messrs. A. Hemsley, Geo. Kelf, T. Winter (vice-chairman), W. P. Thomson, W. Woods, C. F. Harding, H. Purless, E. Burge, W. Taylor, and A. Stanbridge, as members of that committee—are attentive and indefatigable in their several duties, and but for their application the present progress could not be sustained for a single week. Mr. W. Collins, 9, Martindale Road, Balham, S.W., is secretary.

### Binfield Horticultural.

The winter session of the above society commenced on October 14, when there was a very good attendance of members. A most interesting paper on "The Renovation of Old Fruit Trees" was read by Mr. Neve, of Lindlesham. The lecturer dwelt on the importance of keeping old fruit trees in good bearing, and described the method he had adopted with some espaliers, which when they first came under his charge, bore small, unuseable, cankered fruit. He had lopped off all the side branches and headed back the main stem, and thus produced a bush tree,

which, in the course of two or three years, furnished an ample supply of good fruit. This plan the lecturer advocated in preference to grafting when the trees were of good sorts. Manures and manuring, insect pests, head and root pruning, and other points were ably dealt with. The lecture was illustrated by photographs of the trees operated upon. An animated discussion followed, in which Messrs. Bungay (chairman), Paine (secretary), Howell, Busby, Mason, Galliford, and others took part. A hearty vote of thanks to Mr. Neve for his instructive paper closed the meeting.

### Ipswich Mutual Improvement.

On October 16 the second meeting of the current session was held in the Co-operative Hall, Mr. A. Sowman in the chair. A most interesting paper on "The Germination of a Seed" was read by Mr. A. Martinelli, of the Ipswich Scientific Society. By the aid of carefully prepared diagrams, the essayist traced the development of the seed from the impregnation of the ovules by the pollen grains, dealing successively with the formation of the embryo, of endosperm, starch, and other materials in seeds. He likewise referred to the conditions essential to germination, viz., heat, air, and moisture; also to the action of diastase in germinating seeds. An animated discussion, relating principally to the vitality of seeds, was participated in by Messrs. Morgan, Battram, Cotton, Chandler, A. Creek, Cavannagh, E. Creek, and the chairman. Mr. J. Battram, Oaklands Gardens, exhibited a dozen good bunches of Michaelmas Daisies, principally of the lighter kinds. A nice bunch of Lily of the Valley from retarded crowns was shown by Mr. W. Close, Holy Wells Gardens.—E. C.

### Liverpool Fruit and Root Show.

This show, which was opened by the Lord Mayor, Alderman C. Petrie, is fast becoming a great institution for furthering the cause of both gardeners and farmers, the competition this year being really excellent. The greatest success in the show was achieved by Mr. B. Ashton, of Lathom Hall Gardens, who took many leading prizes, also the silver cup offered to the most successful exhibitor. Throughout the day, the show was well patronised by the nobility and gentry of the district, who came to admire, and were more than satisfied at the grand results attained. The fruit section was well represented, and included contributions from Hereford growers. For six culinary Mr. Geo. Faulkner came first with capital Warner's King, and Mr. W. Morgan second.

Mr. Morgan had splendid Blenheim Pippin for the best six dessert, Mr. J. Davies, Leominster, second with Ribston Pippin. Mr. T. Guy scored with Marie Louise Pear; and Mr. B. Ashton second with Louise Bonne of Jersey. For culinary Pears, Mr. J. Davis had the best in Uvedale's St. Germain. In the classes for special prizes Mr. W. Mackerell, of Formby scored strongly, taking firsts with Warner's King, Ribston Pippin, Pitmaston Duchess, and Beurré Hardy. For any other variety of fruit Mr. B. Ashton had very fine Muscat of Alexandria.

The show of Potatoes was a great one, some magnificent samples being seen, and nowhere could finer produce be found. For the best white early kidney, Mr. J. Johnson with Duke of York led; second, Mr. Tinsley, with May Queen. For Sutton's Early Regent, first Mr. J. R. Newton; Best of All won first and second for the early rounds, staged by Messrs. E. Alty and G. Ashley. For a second early kidney, Messrs. J. Johnson and T. Almond with Cole's Favourite and Crocus. For second early round, Messrs. T. Percival and B. Ashton with Royal Standard and Webb's Goldfinder. Early, or second early of any other shapes, Messrs. B. Ashton and E. Alty with Ideal and Standard. For Snowdrop or Lord of the Isles, Mr. Mackarell with the former; Colossals, Mr. E. Davies; Abundance, first Mr. Geo. Ashley; Satisfaction, first Mr. E. Davies. Up-to-Date, a grand entry; first, Mr. T. Reason; Maincrop, first, Mr. B. Ashton. For a late kidney, first, Mr. D. Oldfield, with Bank of England. For a late round, Messrs. B. Bowen and J. Johnson had Syon House and Fielder's Improved. Imperator and Scottish Triumph from the latter were the best late any other shape. Reading Russet, from Messrs. B. Ashton and E. Alty, was the premier early coloured round; and Peerless Rose, from Messrs. E. Davies and J. R. Newton, the best early or second coloured kidneys. Edgecote Purple, the best coloured late kidney, from Messrs. T. Reason and J. Johnson; the best late round was Purple Perfection from Messrs. E. H. Wood and E. Davies.

In the new varieties, Mr. Johnson won with Parker's Seedling, and Mr. Tinsley with May Queen as kidneys. In the new rounds, Mr. Johnson with Sunbeam, and Mr. Ashton with a grand looking seedling. For a new late kidney, first and special, Mr. B. Ashton with Webb's Empire. For a new late round, again Mr. Johnson won with a handsome variety named Victory; second, B. Ashton, with General Buller.

Messrs. Sutton's "specials" went to Mr. Johnson for Abundance and Ideal; and Mr. Ashton with Centenary. Sutton's Satisfaction from Mr. E. Davies was the best in its class. The prize for Reliance was won by Mr. Percival. Webb's "specials"

were won by Mr. Ashton with Webbs' Renown; by E. Davies with Webbs' Motor; and Mr. Haycox with Goldfinder. Messrs. Field's by Mr. Wilson with C. Fielder. Messrs. Kerr's, Dumfries, by Mr. Ashton with Enterprise. Messrs. Nivens by Mr. Johnson with General Buller, and Jno. Wilson with Pioneer. The best new Potato was Edward VII. from Mr. J. R. Newton.

Roots and vegetables were really grand, but space will not permit of full list being given. All the leading firms were thoroughly represented in grain, roots, &c.—R. P. R.

### Reading and District Gardeners' Mutual Improvement.

More than one hundred members assembled at the last meeting of the above association to hear Mr. George Gordon, V.M.H., deliver a lecture on "Beautiful Flowering Trees and Shrubs." Time did not suffice to give more than a running commentary on a magnificent series of photographs, shown by the limelight, illustrating some typical specimens of the double Peach, Almond, Magnolia, Cherry, Plum, Quince, Pear, Thorn, Laburnum, Genista, Berberis, Lilac, Deutzia, Viburnum, Exochorda, Spiræa, Stapelia, Hydrangea, Horse Chestnut, Catalpa, Wistaria, Azalea, Heath, Andromeda, Rhododendron, &c. The exhibits were exceedingly interesting, the honorary ones were a basket of Princess of Wales Violets (splendid blooms), retarded Potatoes (illustrating the method of obtaining young Potatoes all the year round), also a dish of fruit of Psidium Cattleianum (Guava) suitable for dessert or jelly by Mr. G. Stanton, Park Place Gardens, Henley-on-Thames. A collection of Sweet Peas by Mr. D. Agar, gardener to Milton Bode, Esq., Caversham. For Certificates, a batch of Michaelmas Daisies grown as annuals, seed sown in February, planted out in June, and potted in September (Certificate awarded) by Mr. F. Laver, The Gardens, Hillside, Reading, and a magnificent specimen of Orchid, *Odontoglossum grande* (Certificate awarded) by Mr. W. G. Pigg, The Gardens, Treveroli, Maidenhead. A hearty vote of thanks was awarded to Mr. Gordon, on the proposition of the president, for his interesting lecture. Four new members were elected. The subject for the meeting on October 27 will be "Sweet Peas," by Mr. House, Westbury-on-Trym.

### Metropolitan Public Gardens Association.

OPEN SPACES.—At the monthly meeting of the Metropolitan Public Gardens Association, held at 83, Lancaster Gate, W., the Hon. Dudley Fortescue, vice-chairman, presiding, it was decided (in response to a request) to support the Land Dedication Bill, introduced by Lord Balcarras, M.P., and others, to assist land owners to set aside ground for public enjoyment without necessarily having to part with their freehold interests. Communications were read from residents in Birmingham seeking advice as to steps to be taken to secure open spaces, and in giving the information sought, it was agreed to urge the desirability of forming organisations similar to the Association in provincial cities and towns, as centres of open space promotion and effort. It was announced that the Consistory Court had given judgment as anticipated in reference to the building of a parochial hall on Holy Trinity, Stepney, Churchyard Garden, to the effect that it was an enlargement of the church permissible under the Acts, and a hope was expressed that the case would be taken to a Superior Court. Seats were granted for the Dulwich Free Library Garden and Home Park, Lower Sydenham. A letter was read from the Stepney Borough Council agreeing to take over and maintain St. Mary's, Whitechapel, Churchyard, which the Association had undertaken to put in order. Satisfactory progress was reported as regards the laying-out of the Southfields Recreation Ground, Wandsworth; but it had not been possible to commence work at All Saints, Poplar, Churchyard, as the transfer of the ground to the local authority was still incomplete. It was agreed to make offers with regard to acquiring a site in Putney and three squares in Lambeth. It was stated that the erection of a drinking fountain by means of the generosity of a member in Charles Square Garden, Hoxton, had been completed. Donations from the Merchant Taylors' and Skinners' Companies of £10 10s. and £5 5s. respectively were gratefully acknowledged, and there was a need felt for further contributions, there being a considerable diminution in the receipts, owing probably to the adverse effect of the late war and allied causes.

### Royal Horticultural—Drill Hall, October 20.

The meeting on Tuesday last was again of great interest, and hardy flowers, Chrysanthemums, and vegetables were each exhibited abundantly. In the absence of Sir Trevor Lawrence, Bart., Harry J. Veitch, Esq., occupied the chair. The secretary, Rev. W. Wilks, M.A., announced the gift to the society's hall fund scheme of one hundred guineas, and read His Majesty's letter to the Fellows. He also intimated that Leopold de Rothschild, Esq., had promised a contribution to the same fund, of 500 guineas, and Mr. Wilks eloquently urged on any Fellow to do the most that they could to help on the work in hand. Lastly,

he stated that a record had been established in the number of new members elected during one year, for since January there have been 1,005 new Fellows' names added to the books, which surpasses all previous records in this line.

Mr. J. Godfrey, from Exmouth, presented an attractive selection of both early-flowering and exhibition varieties of Chrysanthemums. Amongst the former were the following: Gladiator, Kitty Crew, Harry Grover, Delightful, Mrs. E. V. Freeman, Pink Beauty, Mars, Godfrey's Pet, and October King, the colours being rich and good, and the former very pleasing. Among the exhibition blooms were those of the varieties Britannia, Grandeur, Masterpiece, Lord Alverstone, Kimberley, T. Humphries, Loveliness, Exmouth Rival, The Lion, Attraction, and Exmouth Crimson.

Messrs. Wells and Co., Earlswood Nurseries, Earlswood, Surrey, was also forward with a delightful group of the Autumn Queen, among which were noted R. Hooper Pearson (a fine exhibition flower of large size and good finish), Miss E. Fulton, Lord Alverstone, Mme. Von Andre, Mme. G. Henry, Mrs. T. W. Pockett, Chas. Longley, Miss Alice Byron, and a number of showy decorative varieties. The afore-named were all shown as single stemmed plants in pots.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, set up a very large group of pot Chrysanthemums, each bearing flowers of high exhibition merit. Early flowering sorts in front were as follows: Notaire Groz, Edie Wright, Market White, Goocher's Crimson, Horace Martin, White Quintus, Vivid, Lemon Queen, Bouquet de Feu, and Roi des Précoces.

Messrs. Barr and Sons had Colchicums and Crocuses, and the pretty *Nerine undulata*, &c.; Mr. J. Russell had berried Aucubas; and Messrs. Peed and Son staged foliage plants and Cattleyas. From Messrs. Veitch and Sons, Limited, came a brilliant contribution of the charming *Begonia incomparabilis* (bright rich scarlet crimson), and a selection of their hybrid winter-flowering Begonias. They also had hybrid Javanese Rhododendron trusses, and *Dædalacanthus parvus* in pots, the plants all being well grown.

H. J. Elwes, Esq. (gardener, Mr. Walters), Colesborne, Cheltenham, displayed a very pretty group of well flowered Nerines, and number of the varieties being new or little known. A group of Gloire Begonias, the white and pink varieties, all very large for the time of the year, was sent by Hugh Kerr, Esq. (gardener, Mr. Dunkley), Ardgowan, South Woodford. Mrs. Demison (gardener, Mr. A. G. Gentle), Little Gaddesden, Berkhamsted, was forward with a group of Michaelmas Daisies, in which were included a number of seedlings.

Mr. H. B. May, from Edmonton, had superb plants of *Adiantum Farleyense* and *Cordylines*, while Messrs. Bull and Sons gave variety and somewhat of novelty by a combination of huge Tree Ferns, Dicksonias, and *Cibotiums*. Messrs. B. S. Williams, Upper Holloway, N., staged perfect specimen *Cordylines* (*Dracenas*) in variety, all clean, even, and well coloured.

Perennial Asters from Messrs. Cutbush and Son were seen to great advantage, for the whole plants were set up. A number of good new named varieties were here, including Hon. Ed. Gibbs, Triumph, Golden Spray, cordifolius elegans, c. Diana, Theodora, Captivation, Coombefishacre, and others. They had also some beautiful Carnations. Messrs. Ware had hardy flowers.

From Messrs. J. Hill and Son, Barrowfield Nurseries, Lower Edmonton, there came a beautiful and varied collection of Ferns.

Messrs. Charlesworth and Co., Heaton, Bradford, had a very choice group of hybrid Orchids, including *Cattleya Bowringiana*-superba, *Lælia-Cattleya Goltiana*, *Cattleya* Mrs. J. W. Whiteley, magnifica, *Lælia-Cattleya* La France, *Cattleya* Mrs. Herbert Greaves, &c.

Walter C. Walker, Esq. (gardener, Mr. Geo. Cragg), Percy Lodge, Winchmore Hill, N., had a group of *Odontoglossums*, while from J. Bradshaw, Esq. (gardener, Mr. G. E. Whitelegg), The Grange, Southgate, there was a collection of *Cattleyas* (well-flowered plants), *Odontoglossums*, and *Oncidiums*. Baron Schröder, Sander and Sons, Mr. Gurney Fowler, and also Hugh Low and Co. staged Orchids.

Major Bythway (gardener, Mr. W. Wilkins), Walborough, Llanelly, S. Wales, contributed a brightly coloured collection of Apples, comprising over seventy dishes of the best sorts. From the appearance of the fruits it was evident that very considerable care had been expended on their culture. Mrs. Arnold, The Lodge, Dedham, also had a few dishes of Apples.

R. W. Hudson, Esq. (gardener, Mr. J. Gibson), greatly added to the interest of the meeting by the highly creditable display of vegetables he had on this occasion. It seemed as though every sort of vegetable that gardens grow was here, all nicely staged, and the products fresh and good. The Eclipse Cauliflower were very fine samples; Gladstone Pea and Sutton's Giant French Asparagus were meritorious, Potatoes were splendid, as, indeed, was everything staged; but on viewing the wonderful variety of them, we found it beyond our space and time to try to detail them. The collection were all grown from Messrs. Sutton and Sons' seeds. A Gold Medal was unanimously awarded.

Messrs. Cannell and Sons, Swanley, staged vegetables, including Cannells' Defiance Cabbage, Cranston's Excelsior



Onion, 'Cannells' Prizetaker Onion, 'Cannells' Autumn Giant Cauliflower, and many varieties of Potatoes and other products of the kitchen garden.

#### Medals.

**FLORAL COMMITTEE.**—Silver-gilt Flora for group of Chrysanthemums to Messrs. Wells and Co., Red Hill, and Mr. H. J. Jones, Lewisham. Silver Flora for Michaelmas Daisies to Messrs. Cutbush and Sons, Highgate; for Adiantum and Dracænas to Mr. H. B. May, Upper Edmonton; for Carnations and Chrysanthemums to Mr. W. Godfrey, Exmouth; for Polypodium to Messrs. J. Hill and Son, Lower Edmonton; for winter flowering Begonias to Messrs. J. Veitch and Sons (Limited), Chelsea. Silver Banksian for Tree Ferns to Messrs. Bull and Sons, Chelsea; for Nerines to Mr. H. J. Elwes, Cheltenham. Bronze Banksian for Chrysanthemums to Messrs. Cannell and Sons, Swanley; for fruiting Aucubas to Mr. J. Russell, Richmond; for hardy flowers to Messrs. T. S. Ware (Limited), Feltham, and Messrs. Barr and Sons, Covent Garden; for plants to Messrs. B. S. Williams and Son, Upper Holloway.

**ORCHID COMMITTEE.**—Silver Flora to Messrs. Charlesworth and Co., Bradford, for group of Orchids; to J. Bradshaw, Esq., Southgate, for group of Orchids; to Jas. Veitch and Sons (Limited), Chelsea, for group of hybrid Orchids. Silver Banksian to Walter Walker, Winchmore Hill, for group of Orchids; to Messrs. Sander and Sons, St. Albans, for group of Orchids; to J. Gurney Fowler, South Woodford, group of Orchids; Messrs. Hugh Low and Co., Enfield, for group of Orchids. Cultural Commendation to F. Wellesley, Esq., Westfield, Woking, for Catt. Maroni; to Sir Trevor Lawrence, Bart., Burford, Dorking, for Angraecum; to H. J. Elwes, Cheltenham, for Habenarias.

**FRUIT COMMITTEE.**—Gold to W. H. Hudson, Esq., Danesfield, Marlow, for a collection of vegetables. Silver Knightian to Messrs. Cannell and Sons, Eynsford, Kent, for collection of vegetables. Bronze Banksian to Mrs. Arnold, The Lodge, Dedham, for collection of Apples. Silver-gilt Knightian to Mr. Bythway, Llanelly, S. Wales, for collection of Apples.

#### Certificates and Awards of Merit.

*Anemone japonica* var. *Queen Charlotte* (Barr and Sons).—Flowers large, strong, coloured a deep rosy Apple-blossom shade purplish on reverse side. (Award of Merit.)

*Nerine flexuosa alba* (Barr and Sons).—A Botanical Certificate was awarded.

*Apple, Edward's Coronation* (Hon. H. B. Portman).—Slightly over medium size, roundish; skin greenish yellow, streaked and mottled red on the side next the sun; eye set in a round depression, somewhat deeply, and wide; stalk straight, stout,  $\frac{1}{2}$  to  $\frac{3}{4}$  in long, in deep round cavity. Flavour very good. (Award of Merit.) From Buxted Park (gardener, Mr. H. C. Princep), Uckfield.

*Lælio-Cattleya* × *Bletchleyensis*, *Fowler's* var. (J. Gurney Fowler, Esq.).—Parentage, *Lælia tenebrosa* × *Cattleya Warscewiczii*. The flower is very large and graceful, the petals and sepals curve forward, the petals being very much waved at the edges. They are 2 in broad in centre, and  $4\frac{1}{2}$  in long, coloured purple. The lip is long and protruding, velvety-purple, a very great feature. (First-class Certificate.) From The Glebelands, E. Woodford.

*Lælio-Cattleya* × *Mrs. Chamberlain* (Right Hon. Jos. Chamberlain).—The parentage is *C. chocoensis* × *Brassavola Digbyana*; the latter tells in the lip, which is nicely fringed and coloured pale mauve. The graceful petals are nearly white. (Award of Merit.) From The Gardens, Highbury, Moor Green, Birmingham. Grower, Mr. Mackay.

*Odontoglossum delicata crispum* *Harryanum* (Baron Sir Henry Schröder).—The flowers are large, with pale coloured segments, white at the base and heavily spotted with chocolate colour; the lip is large and white tipped, also speckled and marked with brown, and has a yellow blotch on the claw. The plant bore a six-flowered raceme. (First-class Certificate.)

*Nerine Miss* × *Carrington* (H. J. Elwes, Esq.).—Umbel large, and likewise the individual flowers, which are coloured rosy-purple, the segments twisted and reflexed from about the middle. (Award of Merit.)

*Chrysanthemum Miss E. Fulton* (Wells and Co.).—Very much like Princess Alice de Monaco; a nice rounded flower. (Award of Merit.)

*Chrysanthemum Hon. Mrs. Ackland* (Right Hon. W. F. D. Smith).—A grand Jap., after the R. Hooper Pearson type, but the yellow is of a very different shade, rich, bright, intense. A grand deep flower. (Award of Merit.) From Greenlands, Henley-on-Thames.

*Chrysanthemum Mme. Paola Radaelli* (Mr. N. Davis).—Flowers of enormous size; an incurving Jap. of a lilac tint and paler centre. (Award of Merit.) From Framfield, Sussex.

*Cimicifuga japonica* s *mplex* (Leopold de Rothschild, Esq.).—A late flowering form of a good border plant. (Award of Merit.) From Gunnersbury House, Acton.

## THE BEE-KEEPER.

### Uniting.

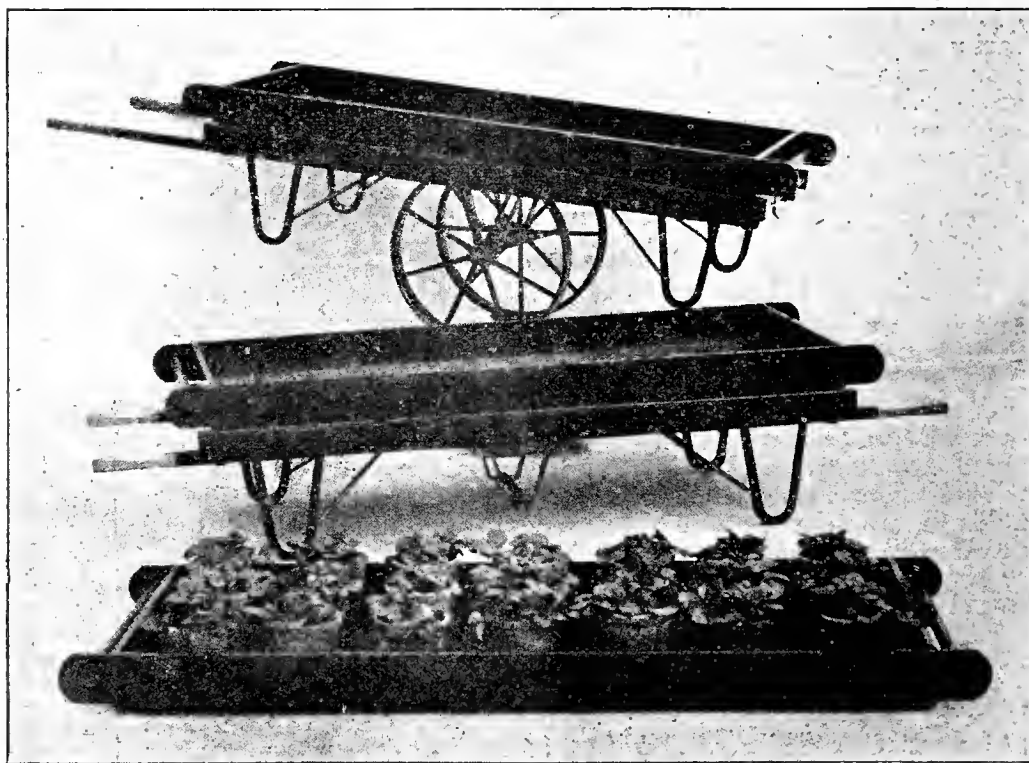
One of the peculiarities of bee life is that if strange bees enter a hive with intent to rob they are immediately detected and expelled or killed, but if loaded with honey they are joyfully accepted.

This knowledge properly applied enables the bee-master to mix bees apparently indiscriminately. The ability to unite colonies is at times as useful and necessary as it appears difficult to the uninitiated. The operation is generally performed in October, with the object of preserving or strengthening weak lots, which, if left to winter singly, would succumb to the intense cold. The chances of successfully wintering these small stocks are slight, and the attention they require in spring is so great that it is more profitable in many ways to winter them in one lot.

Bees may be united at any time of the year, but for winter purposes October is the best month. The cool weather causes the bees to adhere to the combs, and they do not fly much at this period.

Many amateurs make fatal mistakes in performing the operation without realising that a very little more knowledge, or trouble, would have resulted in an almost perfect union. The whole process where bar frames are concerned need not take more than a few minutes. To ensure success it is absolutely necessary that the bees should be brought to precisely the same condition, and only one queen left. A puff or two of smoke administered at the entrance of each lot will frighten them, and cause them to fill themselves with honey, after which, open the hives, move the combs so as to admit daylight, and lift out with the adhering bees, placing them alternately amongst those of the receiving hive, or if preferred they may be lifted "en bloc."

Where there are more bars of bees than one hive will accommodate, select those with brood on them, cover up, and the union is complete. A wide board placed from the



An Improved Plant Barrow.

entrance to the ground makes the bees mark the location, and also prevents them returning to the wrong hive, causing fighting. The greatest cause of fighting, however, is the manner in which the union is made. One part of the process is to subdue the bees properly, and where there are no unsealed stores this is impossible. It is useless attempting a union until they are properly filled with honey. Hungry bees are never easily united. If there are no unsealed stores they must be fed or sprinkled with thin syrup. Success lies in having colonies about the same strength, in the same condition, and perfectly free from irritation.

In cases where stocks are a distance apart bring them close together by moving a foot or so at intervals of a day or so. Whilst on this ground, it may be well to correct the erroneous impression that prevails amongst a section of British bee-keepers, that driven bees can be united to those on bar frames by running them in at the entrance. This is only wild speculation. The advocates of the plan know as much about the operation as (to use an Americanism) would fill a Filbert. They appear to entirely ignore the fact that bees which are not on frames never successfully unite with those on frames.

The only method by which this may be accomplished is to remove the oldest queen; shake the bees of the established stock off the frames on the alighting board, and then as they run in throw the condemned bees amongst them, afterwards replacing the combs. Even this method, with the extra labour of spraying with peppermint, &c., is not always certain, and if fighting ensues the smoker should be freely used, and the hive sides thumped heavily. This will generally restore order.

Where it is impossible to bring stocks close together, deprive the stock of its queen and brood. Two days afterwards it can be readily united to any other colony in the apiary which is in possession of a fertile queen. Another plan which does not necessitate the removal of the brood is to remove the queen, and eleven days afterwards go carefully through and destroy all queen cells. Two days afterwards unite them some evening by the alternation of bars method. The explanation of this is that if bees are rendered queenless, and are so placed that they have no means of raising another, they will, when joined to a colony in possession of a fertile queen, remain in any position.

Bees which have been in transit, confined, or overheated, should not be placed together until they have cooled down. The cooling process is carried out by placing them near the hive to which it is intended to unite them, and removing the cover of the receptacle so as to permit flight. Leave them in this condition for twenty-four hours. They can then be united with perfect safety by the method before mentioned.—E. E., Sandbach.

## Young Gardener's Domain.

Willie's Wall.

Willie was a chorister in the old Abbey church of Borderchester, where he long rendered efficient service as "principal treble." He was a boy of refined tastes, delighting not only in vocal music, but in the execution of Bach's fugues and the like on the pianoforte, in water-colour drawing, and in the cultivation of flowers. But his only garden was a very narrow strip of soil at the top of a wall in his father's backyard. This little border could only be reached by a ladder, and could only be seen either from an upper window or from behind a wooden fence. Here Willie cultivated Snowdrops, Crocuses, Daffodils, and Tulips, followed in due course by Polyanthus, Pansies, Sweet Williams, and other flowers. He had also a thriving bush of Rosemary, and some fancy Ivies and other creepers to run down the wall.

The neighbours would often look over the fence to admire the flowers, and as Willie emerged from boyhood and began to pay more attention to personal appearance, he might often be seen with an elegant "buttonhole" culled from his own garden.

Of course, like other gardeners, Willie had his troubles. The city cats found that his garden afforded a delightful promenade, and they disturbed his slumbers not only by their nightly concerts, but by fears for his flowers. They would wander on the wall in the daytime as well, and Willie's tiny sister Mary has been known to risk her little life and limbs by trying to mount the ladder, not to meddle with her brother's flowers, but to drive away the cats. Thus we see what may be done in the way of gardening under difficulties, and readers in towns and cities may perhaps be glad of the suggestion afforded by "Willie's Wall."

—J. F.

## TRADE NOTE.

An Improved Plant Barrow.

The adjoining figure illustrates the improved plant-barrow referred to on page 339 by Mr. R. E. Sanders in his remarks under the heading, "Wanted—Inventors." It explains itself. The patentee and maker is Mr. John Sanders, builder, 24, Downside Terrace, Hampstead, London, N.W.



## Fruit Forcing.

**PEACHES AND NECTARINES: EARLIEST FORCED HOUSE.**—The trees are now at rest and promise well, the buds of the standard varieties, such as Royal George and Stirling Castle, not being too large. This is a good sign, as Peaches and Nectarines subjected to early forcing year after year are liable to have the buds swelled to a large size, and these not unfrequently fall when they should be starting into blossom. Some kinds are more prone to this than others. Of the very early kinds, Alexander and Waterloo are the worst, often casting most of the buds, and it certainly is due to over-development, as the buds on the sub-laterals (as occurs from stopping when the trees are grown on the standard system) are retained, and the blossoms develop perfectly and the fruit sets freely, while on the first made part of the wood of the shoots the buds are large and drop in showers.

Hale's Early, the very best of the early Peaches, taking quality into consideration, casts many buds, being little better than Early York, which drops the buds alarmingly. Noblesse, however, stands at the head in liability, to cast its buds, then comes Grosse Mignonne, and both these have a tendency to form double or triple fruit buds without a wood bud at the same joint, also to form buds with two or three pistils in embryo, in due course developing into twin or triplet fruit. This is what is meant by over-maturity of the buds, and is common to all large-flowered varieties of Peaches and Nectarines, which probably arises from a prolonged season of growth, with a decided tendency to over-production.

The small-flowered varieties, such as Early Louise, Stirling Castle, Royal George, and Dymond Peaches, and are the best of early forced, being high in colour and of unquestionable quality. Of Nectarines, Cardinal, Early Rivers and Stanwick Elruge are excellent for early forcing. Bud-casting seems influenced to a great extent by treatment, and in the case of early forced trees it is necessary to keep them as cool as possible after the fruit is gathered consistent with their safety, even shading where the panes of glass are large and the weather bright and hot for prolonged periods, and remove the roof lights when the wood becomes sufficiently matured. Where this has been done the borders have got thoroughly moistened to the drainage, and when that is the case, and the buds are not over-matured, there is relatively little danger of their falling.

The trees should be pruned, the house thoroughly cleansed, limewashing the walls with a handful of flowers of sulphur added to a pailful of limewash, and the trees washed with a tepid solution of carbolic soap, 1½ oz to a gallon of water, using a brush and taking care not to dislocate the buds. This may be followed by a more powerful insecticide, the petroleum emulsion, and, indeed, all oils or fats, properly saponised, emulsified, or made soluble and innocuous to vegetation, having fungicidal as well as insecticidal value. Tie the trees to the trellis, forwarding everything so that a start can be made when the proper time arrives. The roof lights should remain off until the time of closing the house, or if the lights are fixed, which is a great mistake, as it causes the trees to be subjected to alternating fluctuations and depressions, both of heat and moisture, the inside borders must not lack moisture, but be made and kept in a damp state down to the drainage, and air be given to the fullest possible extent. No amount of frost will injure properly matured wood, and the buds are never injured by frost until they commence growing.

**SECOND EARLY HOUSE.**—For second early forcing there are no better than Hale's Early, A Bec, Stirling Castle, Royal George, and Dymond Peaches; Rivers' Early, Lord Napier, Stanwick Elruge, Humboldt, and Dryden Nectarines. The trees have for the most part cast their leaves, the roof lights having been off some time, for if kept over the trees longer than is usual, as sometimes is necessary when the wood is strong to mature it properly, they must now be removed. The ventilating lights, both top and bottom, may remain, so that the fixing and refixing of them is obviated, while the trees have complete exposure to atmospheric influences. The exposure has an invigorating effect, it secures perfect rest, and the rains do much to free the trees of insects, besides thoroughly moistening the borders. When the foliage is all down the necessary pruning, dressing with an insecticide, and the cleansing of the house should be proceeded with, removing the surface soil down to the roots and supplying fresh material, but not covering the roots deeper than 2 in or 3 in. In the case of fixed roofs, water may be



necessary. Under no conditions must the trees be allowed to become dry at the roots.

**MIDSEASON HOUSES.**—The trees in these are just in the right condition for lifting. It should be done with dispatch when it is decided on, having all the materials in readiness. It is not, however, safe to operate until part of the leaves have fallen, yet not wise to wait till the green leaves on the laterals mature, as these will not drop for some time, and they may be useful in prompting root action in lifted trees. Provide efficient drainage, shortening back any strong roots, and bring any that are deep nearer the surface, laying all in the top foot of soil, and employing the compost compactly. Good loam, rather strong, with a sixth of old mortar rubbish admixed, will grow Peaches and Nectarines perfectly. If the soil be light, add a fourth of clayey marl, dried and pounded, and if very strong a similar quantity of road scrapings, avoiding manure excepting the soil be poor, then add a fifth of decayed cowdung to light, and a similar quantity of horse droppings to heavy loam. Give a good watering after lifting and replanting, and the trees will soon get established in the fresh compost. Trees judiciously treated at the roots seldom fail to set and stone the fruit satisfactorily. Borders containing soil in a soapy mass, where it is not possible to remove it, may have a dressing of air-slaked lime—an inch thick is not too much—mixing it, after laying a few days with the surface soil as deeply as the roots will allow without disturbance. Nothing, however, is so effectual as lifting and renovating the border.

**LATEST HOUSES.**—Except the latest varieties, of which Golden Eagle is one of the best, the fruit is all gathered. Trees from which it has been gathered should have the bearing wood of the current year cut out, leaving only so much wood of the current year's production as is required for filling vacant space and affording fruit next year. The foliage should be thoroughly cleansed of dust or insect pests by a few good washings from the syringe or garden engine. After that the trees will not require syringing, dryness with thorough exposure of the wood to light and air being essential to the perfecting of the wood and buds. Where this is not effected the house may be kept rather close by day, so as to secure a good heat, there being, of course, enough to secure a free circulation of air, and the house should be fully ventilated at night. Any trees that have to grow wood should have a trench taken out as deep as the roots and about one-third the distance from the stem, leaving it open a fortnight, then filling it firmly.

### Kitchen Garden.

**CARROTS.**—Root crops, including Carrots of the various types—Short Horn, Intermediate, and "Long" varieties—should all be lifted before the weather becomes decidedly wet. Lifting the roots and preparing them for storing is much pleasanter work when the ground is dry and clean to tread upon. The roots also will dry quickly, and are in much better condition for the necessary storing than when wet soil adheres to them. Loosen the roots carefully with a fork, when they will readily withdraw. Cut off the foliage within an inch of the crown. Should the weather conditions be favourable, the roots will, after lying upon the surface of the soil for a day, be sufficiently dry to store away. The method of storing for all the best-shaped roots of good quality is to place them in a cool outhouse on a dry bottom, arranging them between layers of dry sand or ashes. The less shapely and important roots should be placed in a heap in a dry corner, covering with straw or any dry material.

**BEETROOTS.**—These roots are better out of the ground now that growth is practically ceasing and the soil is becoming very moist. Accomplish the lifting with the utmost care, so as not to break the thicker portion of the tap root, which causes the roots to bleed and lose colour. This can readily be avoided by gradually easing the roots in lifting. For the same reason, the leaves must not be removed too closely to the crown, and instead of cutting off the leaves, twist them off well above the crown. The roots will keep well in soil or sand in a position safe from severe frost.

**CELERY.**—Where there is a brisk demand for well-blanching roots of Celery throughout the winter, the supply cultivated must be ample, including a good breadth of late plants. The final earthing of these may be deferred as long as possible, though the blanching may be commenced by several preliminary earthings, applying the final when growth is finishing and the approach of frosts inevitable. Drawing the leaves together, and lightly securing them with raffia grass, is also a means of slightly blanching; but the chief purpose of this is to prevent loose soil reaching the hearts of the plants when earthing. The earthing process should be carried out in fine weather, when the Celery is dry and the soil not sticky. Press the soil firmly round the plants, and, except when finally earthing, do not carry the soil above the hearts. Bank the sides fairly steep, so as to carry away the rain.

**MUSHROOMS.**—A succession of Mushroom beds made in any warm outhouses or sheds will provide some profitable crops

over a considerable period. Fresh horse droppings should be collected in a dry shed, preventing them heating until a good heap of material has been brought together. Then form into a cone-shaped heap, and, after a few days' fermenting, turn the manure, placing the outside inside, and vice versa. This must be continued until the whole of the rank heat has been expelled, when the beds may be made up. Three or four feet is a good width; the length must be governed by the space and material, but the depth ought not to be less than a foot when the materials have been trodden together, or otherwise packed firmly. The spawning must be regulated by the heat of the bed. If the temperature should rise above 90deg., which can be ascertained by a plunge thermometer, defer the spawning until the temperature declines to 85deg. Good, active spawn should be used, breaking bricks into pieces about the size of eggs. Make holes in the manure 9in apart, and bury them just below the surface, working the manure firmly round and over each piece.

Soiling the bed is the next process. It may be done at once or deferred for a few days. Employ some good fresh soil, placing it about an inch and a half thick. Beat it down firmly with the back of a spade, and leave the surface smooth.—EAST KENT.



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**BOOK WANTED** (J. Cleland).—A book giving the English and Latin names of plants is published by Collingridge and Co., entitled an "Encyclopædia of Gardening," which was published in 1895, and costs 3s. or 4s. You should write to the publishers, at 148, Aldersgate Street, London, E.C.

**STEPPING DUTCH BULBS IN PARAFFIN OIL BEFORE PLANTING** (T. J. R.).—We have not known a successful trial of the procedure you name, and are also doubtful as to its not injuring the bulbs, for though we have used paraffin for moistening seeds before sowing to save them from the attack of mice and other predatory pests, finding the treatment very effectual in the case of Beans and Peas, and red lead for coating small seeds, we have no experience of treatment of bulbs with paraffin oil, and think it likely to get between the scales of the bulbs, if not into the crown, there injuring the living tissues, and possibly outside damaging the base from whence the roots issue. Red lead might act to some extent as a deterrent of the rodents taking the bulbs, but even of this we have no experience, for we find it better to trap the animals, commencing baiting and trapping in advance of planting. It is likely that soaking the bulbs for about half an hour in a solution of formalin, one part formalin in 400 parts soft water, would probably prevent the mice, &c., from taking the bulbs. It is a poison, and certainly useful in destroying the germs of fungoid pests; also animal ones, such as root-mites, eelworms, &c.

**EXHIBITING CHRYSANTHEMUMS** (De War).—Next week we hope to furnish a rough diagram affording an illustration of the method generally adopted for conveying specimen Japanese Chrysanthemums on long stems to the place of exhibition. It is in the form of a strong deal box, which can be painted green or slate-coloured on the outside. On the inside two wooden rods are placed from end to end, one at a higher elevation than the other, the upper one high enough to come just below the bloom fixed to it. The long stem should rest in a vessel of water, and be tied to the cross-rods in two places; a little wadding or soft paper being wrapped round the stem where the tie is placed, so as not to cut into it in any way. This is the method generally employed by competitors who exhibit in the large vase class at the Royal Aquarium, and the flowers are conveyed in this way long distances without taking injury, and come out of the boxes quite fresh. As we did not see the Chrysanthemum shows at York or Edinburgh in the autumn of last year, we are not in a position to draw comparisons. We cannot inform you regarding the relative positions of flowers at Ebor and "Edina" (Edinburgh?), but if the latter is referred to, then certainly the quality is of the very highest.

**QUERY.**—A correspondent enquires about an illustration which appeared in a London paper some short time ago, of a budding instrument called the "Galbreath Budder." He asks: "Could you send me an illustration of same, give me name of inventor, address where sold, and cost?" Any information relative thereto will oblige our correspondent.

**EPIPHYLLUM CULTURE** (Idem).—They should have enough water to keep the soil moist, but not sodden, and after flowering they should have no more than sufficient to keep the stems plump until they are started into growth in the spring, then water freely and keep moist. They will flower well in a temperature of 45deg, but may be forwarded in a stove. The flowers endure longer in a greenhouse than in a stove. A greenhouse is most suitable for them, with extra heat when making new growth.

**VINES AGAINST END OF HOUSE** (F.I.).—Plant the Vines a yard apart 18in from each end, and the rods we should take upright, and cut them back to 3ft, depressing the canes in spring so as to ensure their eyes breaking regularly. When these have broken disbud so as to leave the shoots at 18in apart on both sides of the rod, taking the first at about 1ft from the soil. You will require to retain one shoot as a leader in addition to the side shoots. Vines trained upright always break much more strongly at top than bottom, hence it is good practice to train the rods in the serpentine form, and originate the shoots from the horizontal parts at 18in apart, that distance being left between one curve and the other next above it.

**HYACINTHS IN GLASSES** (A Lady Amateur).—Place the bulbs in the glasses after filling the latter with soft water so that the base of the bulb just or barely touches it, always keeping the water to that level, and removing it whenever it becomes impure, as may be known by the ends of the roots looking woolly; then replace with fresh which has been kept overnight in the room with the plants to acquire the same temperature. To keep the water longer sweet, a piece of charcoal about the size of a small walnut may be placed in each glass. Set the glasses in a cool and dark cupboard until the roots have formed, but remove them to the light before the crown has grown an inch, and then give air daily if mild weather, but do not stand the glasses on stone, brick, or iron, but on wood. The plants may be sprinkled overhead every day with rain water until they come into flower, which greatly invigorates them. Avoid frost, wind, and a close room, and keep them off the mantelshelf. A window is the best place. October is the best time to place the bulbs in the glasses.

**FREEING LAND FROM SLUGS** (V.T.).—The best means is to give the land a dressing of gas lime, fresh from gasworks, applying  $\frac{1}{2}$ cwt per rod, spreading evenly, and leaving a month or six weeks before digging in. The smell, however, is offensive, and it may not be used over the roots of fruit or other trees, but only on bare ground, and that not cropped until spring. A dressing of quicklime is effective, applying 1cwt per rod, placing in little heaps, slaking with the smallest amount of water necessary to cause it to fall into an apparently dry powder, and spreading whilst hot, leaving on the surface a day or two before digging in, and choosing dry weather. This is preferably done in the autumn. In spring, before sowing seeds or setting plants, the ground may be dressed with nitrate of soda, finely crushed, spreading evenly, at the rate of 1 $\frac{1}{2}$ lb per rod. It should not come into contact with seed or plants; therefore, apply before taking out the drills. Taking the crown bud is removing all the buds on a branch but the central one, and is usually that of buds of a shoot on the second break. It is, however, too late for crown buds, yours being what is known as terminal bud, and this is also the terminal bud of a shoot, and the removal of all the buds of a shoot but the terminative is all you can now well practise. The operation is a very simple one, but difficult to explain without illustration. This is given in Mr. Molyneux's "Chrysanthemums and their Culture," price 1s., which you should procure.

**NAMES OF FRUITS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (X. Y. Z.).—1, Cox's Pomona; 2, ditto; 3, Beauty of Kent; 4, Cellini; 5, a local variety; 6, Yorkshire Beauty. (A. R. T.).—A, Lady Henniker; B, Tower of Glamis; C, Reinette de Canada; D, Warner's King; E, Cox's Pomona; F, Rymer; G, Northern Greening; H, Hollandbury. (J. Merrick).—1, Beauty of Kent; 2, Golden Noble; 3, Broom Park; 4, Gansel's Bergamot; 5, Eyewood. (P.).—1, Hoary Morning; 2, Peasgood's Nonesuch; 3, Beauty of Kent.

**NAMES OF PLANTS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. Bertram).—1, Aster Novæ-Angliæ lævigatus; 2, Rudbeckia speciosa; 3, Linaria montana; 4, Helianthus multiflorus; 5, Azara microphylla. (L. M.).—1, Begonia argenteo-guttata; 2, Begonia Bruanti; 3, B. Vershaelti; 4, B. rex var.; 5, B. acuminata. (Zoe).—1, Begonia Dregci. It is of very great assistance to us to have representative samples to name from, by which we mean a portion of stem as well as leaves (and flowers, in flowering plants). (N. T.).—1, Salvia azureus; 2, Adiantum Williamsi; 3, Phrynum variegatum.

## Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.                 | Direction of<br>Wind. | Temperature of the<br>Air. |              |              |              | Rain.          | Temperature of<br>the Soil.<br>At 9 A.M. |                      |                      | Lowest<br>Temperature<br>on Grass |
|-----------------------|-----------------------|----------------------------|--------------|--------------|--------------|----------------|--|----------------------|----------------------|-----------------------------------|
| 1902.<br><br>October. |                       | At 9 A.M.                  |              | Day.         | Night        |                | At<br>1-ft.<br>deep.                     | At<br>2-ft.<br>deep. | At<br>4-ft.<br>deep. |                                   |
|                       |                       | Dry<br>Bulb.               | Wet<br>Bulb. | Highest.     | Lowest.      |                |  |                      |                      |                                   |
|                       |                       |                            |              |              |              |                |  |                      |                      |                                   |
| Sunday ...12          | N.N.W.                | deg.<br>52.1               | deg.<br>48.3 | deg.<br>59.5 | deg.<br>45.2 | Ins.<br>—      | deg.<br>53.5                             | deg.<br>53.9         | deg.<br>54.5         | deg.<br>34.3                      |
| Monday ...13          | S.S.W.                | 58.9                       | 55.8         | 61.2         | 42.5         | 0.03           | 53.2                                     | 54.0                 | 54.5                 | 33.2                              |
| Tuesday ...14         | W.N.W.                | 54.9                       | 52.5         | 59.5         | 53.8         | 0.04           | 54.3                                     | 54.0                 | 54.4                 | 51.5                              |
| Wed'sday 15           | S.W.                  | 57.4                       | 53.0         | 64.2         | 47.8         | 0.34           | 53.7                                     | 54.2                 | 54.5                 | 38.0                              |
| Thursday 16           | S.W.                  | 53.9                       | 50.0         | 56.4         | 48.3         | —              | 53.1                                     | 54.1                 | 54.5                 | 40.8                              |
| Friday ...17          | W.N.W.                | 47.8                       | 42.7         | 54.3         | 41.0         | 0.21           | 51.3                                     | 53.8                 | 54.3                 | 31.6                              |
| Saturday 18           | E.N.E.                | 49.4                       | 48.9         | 51.1         | 42.5         | 0.02           | 50.9                                     | 53.2                 | 54.3                 | 29.2                              |
| MEANS ...             |                       | 53.5                       | 50.2         | 58.0         | 45.9         | Total.<br>0.64 | 52.9                                     | 53.9                 | 54.4                 | 36.9                              |

The weather during the week has been dull, with cold winds and intervals of bright sunshine. Rain fell on five days.

## Trade Catalogues Received.

Toogood & Sons, Southampton.—List of Novelty Collections.

Wm. Watson & Sons, Clontarf Nurseries, Dublin.—Roses Fruit Trees, &c.



## The Hand to the Plough.

The plough is typical of agriculture, and very properly so. Without the plough or its equivalent the land would remain unprofitable and foul. The plough comes to us as one of the oldest known cultivators, and it will remain as long as seed time and harvest return. There are many hindrances to the work of the plough, and they are widely different as the points of the compass. Last autumn we were bemoaning that with harvest finished early, and fine days, we were not able to take advantage of the extra bit of time in hand that we had, simply because the ground was iron bound; not in the hands of frost, but in those of drought, an equally perplexing situation. How we longed and hoped for a change in the weather.

There is in this neighbourhood a certain town which holds its annual, and very large, fair on October 11, and it is proverbial that this fair rarely takes place except with a downfall of rain. Well, we waited and hoped for the 11th, for at last we should stand a chance of moistening showers; but lo! the 11th dawned and closed fine, neither did the succeeding days bring the desired change. When we did get the rain, ploughing went on merrily. This year we are late all round; hay harvest barely finished before the Corn was ready. The Corn harvest is dragging out its weary length, and, despite harvest festivals, is far from finished yet. Soaking sheaves cannot be led, and no ploughing can be done (or very little because of the condition of the ground). There are certain adventurous spirits who will be on, weather or no; but it is certain to the thinking man that more harm is being done than good; that is, on lands of any depth or solidity.



Of course, there are light lands that won't retain water at all, but we are now speaking of the generality of soils. There is just now so much to be done and so little time in which to do it. We have spoken of those whose harvest is not yet finished (a neighbour has fifty acres of white Oats out to-day). He certainly has no men or horses to spare. It was an old practice to have the seeds ploughed before harvest, and this went far to ensure a good seed bed, not too fresh or light, but this also was in the good times when the Wheat crop was the great stand-by. Now we grudge giving up the seeds so long as there is a bite of any sort, and certainly many of us are busy with our seed pastures when we should be turning our attention to those Wheat stubbles which we intend for Barley, or which need preparation for next year's roots. Then there is the land that was occupied by the Mangold plot, and in many districts the great area that was under Potatoes. We are somewhat afraid there is a growing tendency to slip ploughing Potato land; it is a mistake; but we expect often time presses, and, at any rate, there is not much rubbish left after a good crop of Potatoes.

Land, too, intended for next year's Potatoes must be worked so soon as possible. One neighbour, who has a good many irons in the fire, has much of his ploughing done by steam power. It certainly sets his forces free for other work, but he is a man with a long pocket. We spoke of the harm done by ploughing when the land was very wet; this refers especially to strong, tenacious land. Land of this description is fully stored with plant nutrition. Water and air liberate this, and make it active; but unless the land is fairly dug at the time of ploughing, you defeat your own object. Strong land ploughed wet turns up like a piece of liver, and is perfectly impervious to water or air. Nothing will do it good till frost comes, and often by that time the proper seed season is far past. The earlier seeds are ploughed up the greater chance there is of the destruction of insects and grubs and wireworm by the birds; they are then nearer the surface of the soil; cold weather sends them quickly down.

Some farmers in their anxiety to gather up and use every morsel of green stuff, allow their ewes to feed on the green tops of the field Mangolds. This is poor keep for ewes, and they do not return to the land the value that would accrue to it were the green leaves ploughed in. The leaves, in other words, are a better manure in a raw state than when they have been passed through a sheep. It is always poor economy to underfeed the breeding ewes.

There is nothing that looks better than good even ploughing; but this, like many other agricultural arts, is much neglected. The young men won't learn, and the old ones are dying off. We hear much, too, nowadays of the digging plough; it perhaps does better more satisfactory work, but with less neatness to the eye. To make a good job, good weather is needed, also a sensible man and a pair of good horses. We wonder how many of our readers saw that cartoon in "Punch" depicting Lord Salisbury as a ploughman leaving the completed field after having finished his last furrow. How people praised it, it quite took the popular fancy, but—the artist forgot one thing. There was the field, the plough lay idle, and the weary ploughman was homeward bent; but where were the horses? He would have looked more true to life had he been sat sideways on the near side horse; but we can't expect artists to know every little detail of farm life!

On the subject of the horses, it is well to remember that October often finds them a good deal out of condition. They have had heavy harvest work, and possibly with it high living, and now they have still heavier work under unpleasant atmospheric conditions. We know it is the custom on some farms where the arable land is far off to make what is called "one yoke," i.e., not coming home at dinner time, or, at least, not till a three o'clock dinner. The horses then are often over-tired and overheated, and don't clear out their mangers as they should. We do not think it altogether a wise policy.

We saw some ploughing (?) only to-day, the aim and object of which we could not divine; or, rather, we guessed at the reason. We saw some perfect clean stubbles being ploughed with a three-furrow plough, drawn by three horses; depth of the furrow, 3in. We suppose this was done so that the owner could say the land had been ploughed; but the benefit could be but a mere nothing. We think had an American cultivator been used instead (which would have taken a breadth of 5ft and penetrated 5in) the result would

have been much better. Of course, should that land be reploughed in the spring, the position will be altered; but we doubt much if that field will see a plough for a long time to come. To destroy Thistles and rubbish the ploughing must be deep, and the sods must be buried.

Where fields are being ploughed for Potatoes, it is a question of very deep work, and no furrow is good enough unless 8in to 10in deep; that is, if the soil will allow of it. If it does not, well, then, all we can say is that that land is not for Potatoes. It is well to consider what grand work the frost, rain, wind, and sun will make of a field thus ploughed. There is another point about ploughing which it is well not to lose sight of. Nowadays every lad is as good as his master, and can make every bit as perfect work; and so these young ploughmen look down with contempt on ploughs with wheels; they can plough without them, and much prefer it. Of course, it is better style, and would gain them points in a ploughing match, but we very much doubt if the innovation is a good one for the land or the master's interest.

"Why?" you will ask. Ploughing is hard work, that is, if properly done, and slow work, and there is much of it, and human nature would not be human nature if the lads did not try in some way to ease themselves; therefore, if left to themselves with a wheelless plough they may make excellent work while the master or the foreman is on the look out, but directly their backs are turned up comes the share, and the work gets to be very superficial and light. They ease themselves and their horses at the expense of good tillage, and get gaily over the ground. There is more robbery done in this way than the casual observer would detect.

If a lad is set to work with a wheel plough, and care is taken that he does not alter the wheels, he is bound to make the furrow of uniform depth. There will always be a fight over the matter, wheels or no wheels; but the master should be very firm, except in those cases where the ploughman is an old and trusted servant, one who really takes an honest pride in his work. It is not Wheat sowing just yet, or there might be some very unsatisfactory seed beds. Wheat must have a firm, solid foundation to do well, whereas Barley requires something light and friable. It is well so soon as ploughing is done to sadden the land with the presser.

### Work on the Home Farm.

It has been a dreadful week: rain! rain!! rain!!! The horses have been usefully employed in ploughing, but it has been anything but pleasant for them and the ploughmen. We never saw ploughing better done; and if it had been September and not October, the prospect for Wheat sowing would have been good. As it is, we must sow soon, though the ploughing be only just finished, and unless we can use the roll freely, which seems very unlikely at present, the seed bed cannot be firm enough to prove satisfactory. We have noticed a field or two harrowed down for drilling, but not seen a drill working yet. Truly, one late season begets another.

Potato lifting is at a standstill. One day's work in a week makes poor progress, and our Irish hands are becoming impatient with the delay. We saw to-day a party of them amusing themselves by ratting in a hedgerow. Possibly they were tired of vegetating in the granary; perhaps they had hopes of finding a rabbit and having a pie.

Notwithstanding the wet weather, there are few diseased Potatoes as yet. The crops are not as heavy as last year, but quite up to the average, and with less disease, that is so far as our observation goes, and it has extended over some 500 acres on ten farms during the past week. Professor Maerker is very good, but new Scotch Up-to-Date seed from Dunbar beats all. If the new kind, "King Edward VII.," proves superior, it will, indeed, be a "Champion."

Our good report of live stock has at last to be modified. There is a great deal of trouble amongst lambs. They have been suffering from a cough for two or three weeks, but that is very usual at this season. Events prove that the cough was caused by worm in the throat, and those farmers who did not drink their lambs when they were well as a preventive measure, are suffering losses, and drinking them now. Another case of locking the empty stable.

The best lambs we have seen were on a piece of very fine Thousand-headed Kale, waist high. The shepherd reported a clean bill of health. The sheep had been on the Kale a fortnight, and appeared in excellent form to take to the Turnips adjoining, when they are ripe, but they keep on growing, and there is hardly a yellow leaf. With green food so unripe and watery, a good supply of dry food is most essential.

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*Journal of Horticulture.*

THURSDAY, OCTOBER 30, 1902.

**A New Era.**

**S**TICK to your task and all will come right in the end. A homely and well-worn phrase is this, but it is also one which contains a great truism applicable to nations and individuals alike. Dark times may come—and they often will come—but in the face of all drawbacks the man who “faints not by the way,” but still presses onward, must inevitably achieve a fair amount of success. As a nation we have, during the last few years, been passing through a time of sore trial and great danger, for while our energies were concentrated on the stern conflicts of the battle field, our commercial competitors were forging ahead, by improving their methods and doing their best to capture our trade, both at home and abroad. In many instances they have unfortunately succeeded to a great extent, but signs have lately been apparent which go to show that a “new era has dawned upon the British people.” Recent trade returns show considerable improvement, and on all sides there are welcome evidences that, as a nation, we are “girding up our loins” to fight with might and main the competition which meets us at every turn; true there are hosts of difficulties before us, but if they are faced with an undaunted spirit and with strenuous endeavour, they will disperse like the mists of an autumn day.

Now let us turn to the realm of horticulture and see what is being done to keep pace with the needs of the times. Great efforts are undoubtedly being made to see that those who are beginning their career shall start with a sure foundation. With this object in view many educational establishments have sprung up, at which the teaching of both the theory and the practice of horticulture go hand in hand. The Royal Horticultural Society now

**R**EADERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to “**THE EDITOR,**” at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.



affords the workers in its gardens good facilities for study, and for becoming well grounded in the theory of gardening, and no one will, I think, venture to say that the practical instruction given is not of the highest order. In the great national garden at Kew, and in many other public gardens, the valuable courses of lectures given are sufficient—without considering the many advantages for practical work—to cause great competition in filling the vacancies which occur. Many gardeners of olden times would have felt happy indeed could such advantages have been theirs, and when we also consider the reasonable rates at which good books can be obtained, no one, I think, can complain of the facilities which exist for acquiring knowledge, when compared with those which prevailed twenty or thirty years ago. The gardening instinct among the masses is also catered for, as suitable lessons are given by experts in connection with the educational schemes of the majority of County Councils, some of which even possess a good library of horticultural books which are circulated free. Let us also consider the practical side of the matter, because no amount of theory is of much value unless it is turned to practical account, and in some cases a sound theoretical knowledge has the effect of causing the possessor to ignore the necessity of doing good, practical work. Fortunately, however, such cases may be termed the exceptions, and under improved methods of training a knowledge of theory should prove an incentive to the performance of sound practical work, and when such conditions universally prevail, the new era will be in the full tide of prosperity.

On the practical side again, slowly yet surely—yes let us hope surely—the question of co-operation and cheap and rapid methods of disposing of perishable produce is being tackled with vigour, and with the advent of perfected and less expensive motors, outlying districts will be brought in direct communication with large towns. Those who are fully conversant with the matter know well what a stimulating effect this will have upon many neglected localities. That important phase of commercial horticulture, viz., “the fruit supply of these islands,” was dealt with at considerable length in the pages of the *Journal of Horticulture* some months ago, when it was shown beyond dispute that although much has been done during the last ten years, the work has not been done on sufficiently extensive lines. The season for planting has now arrived, when great efforts should be made to atone for past neglect by planting largely on suitable sites, where the soil is favourable. I say this for no sentimental reason, but because I know there is money to be made in the venture, and that, too, without any risk of losing the capital invested when knowledge and industry are brought to bear upon the work. There are plenty of small farms and estates offered for sale at the present time, and those who buy them at their present value, and invest in fruit culture on the right lines, will be taking a wise step. There are also many small holders who by the exercise of a little tact might come to an arrangement with their landlord which would make it worth their while to plant an acre or so. The help of all classes is wanted to greatly reduce the amount we annually pay for fruit which might be grown at home. Good trees can now be bought at reasonable prices, and if the fine stock in our nurseries which now awaits the “planters’ hands” could be cleared out entirely during the next five months, then a new era in fruit culture would indeed have dawned.—ONWARD.

## Economy.

(Continued from page 319.)

### The Fuel Bill.

Many a heated argument crops up over this question, and probably greater friction than arises from any other phase of garden economy. Not a few of the most generous patrons of gardening who spend ungrudgingly in other directions are apt to regard the firing bill as one which burns the biggest hole in their pockets. Let but an atom of coal or coke be visible on the ash heap, it is able to kindle a blaze which a hosepipe of eloquence may fail to extinguish. Much ado about nothing? Well, such an apparently trifling stumblingblock may be the means, have been in one instance, aided by a lamentable want of tact, of tripping up a good man and throwing him “out.” However, most men know the importance of not only avoiding evil, but of keeping from all appearance of it; and most men, too, have doubtless tried all ways and means to reduce this bill to its lowest consistent with safety and good work, so far as

existing appliances and local circumstances permit. Nevertheless, it is a question whether mechanical ingenuity has been exhausted in horticultural heating. Can those who have the most up-to-date system say that such system is the most perfect that could be devised? That heating engineers have arrived at the tether of their limits seems scarcely possible with the innovations and vast improvements continually being made in other directions, only inasmuch as they seem well content to leave us pretty much as we are. It remains, probably, for gardeners themselves to pave the way to perfection, as, indeed, gardeners have done to improvements; for instance, the late Mr. Stevens, of Trentham, working on the principle of the Cornish steam boiler, gave to the gardening world in the boiler named after that home of gardening one of the most powerful heat circulators we have. But few, unfortunately, have the opportunity and privilege of carrying their ideas into practical form.

The price of fuel, like the price of labour, is governed by circumstances outside a gardener’s control, and like that important item, too, if it cannot be wisely reduced it is always open to obtain the highest possible return for outlay. Oh! This means good stoking, some will say, which we know all about. It does; all that, and more. It is not surprising that after firing through a long winter and dreary spring a relief from labour and expenditure is sought by letting out the fires; yet, during sunless spells and low temperatures so oft prevailing at intervals throughout the summer season, shovels of fuel may save barrowloads later on in that most unsatisfactory endeavour to advance arrested growth in the plant section, or to obtain delayed maturation in the fruit department. It goes without saying that a volume might be written, as, indeed, volumes have been, on this subject of heating, entailing endless discussion by savants on the matter, all of which tends to show that finality has neither been reached nor unqualified satisfaction obtained. With one thought only over new departures the fuel bill is filed, viz., in suburban districts where gas is cheap, is there no opening for utilising it in horticultural heating? With present appliances, perhaps, not; but given copper boilers adapted for the purpose, why should not gas, which in many houses has abolished the kitchen fire for cooking purposes, be found as economical with all the added advantages of cleanliness and, practically, automatic working? “Oh! It wouldn’t answer,” is the abrupt dismissal by somebody of the matter. But, my dear somebody, my answer is “not proven”; and, probably, the dreaded gas bill would compare very favourably with the bugbear of a fuel bill; and, even in gardening, of two evils choose the least.

### Implements and Sundries Bill.

How blest is he who not only is able to do the right thing at the right time, but has a place for everything and everything in its place. Garden tools are not an unimportant item in first cost alone, but the vexation of spirit begotten of their abuse where the want of a system makes everybody’s tools nobody’s care amounts to more than can be estimated in figures, although they may be no inconsiderable adjunct to the bill. It is the means, too, of utterly demoralising good labourers and providing openings for excuse from bad or indifferent ones; and the nobody knows and nobody cares sort of principle prevailing is totally unworthy of that good gardening all aspire to, but some fail to reach. The force of example is one of the most powerful auxiliaries to law and order in garden government; hence, although guilty of repetition, a worthy Gloucestershire labourer, whose well worn spade, like his own character, as bright as silver, has long since been hung up in Time’s toolhouse for good and all, may be again exhumed, as he has been before, to point a moral and adorn a tale. In that model toolhouse of the long ago there they hung his spade, his fork, and all comprising his garden kit, conspicuous among the other sets of well kept tools by loving care bestowed on them after the bell had sounded Cease labour for the day. Such men as old Ephraim Gegg, all honour to his memory, and such tools—would there were more of them—do the best work. The moral is obvious. The method is perfect.

To-day, compared with auld lang syne, some of the most necessary garden sundries are represented by valuable goods contained in small parcels; for example, the virtues of a sackful of tobacco paper are now stored in a pint bottle of vaporising compound, and those who can compare the ancient, man-choking, plant burning system with the modern safe and certain method can regard it as but little short of a revolution. Still, there is no lack of grumbling about expense, and how necessary it is that strict economy should rule their use. A lock-up cupboard in the potting shed for not only the fumigating equipment, but for all similar sundries in frequent demand, which have the habit of smashing themselves, or the trick of vanishing altogether, is indispensable to thrifty management, and the garden office or storeroom where all heavier goods are tidily arranged is not less conducive to law and order than it is to economy.—QUIZ.

(To be concluded.)

**Sophro-Lælia × Heatonensis.**

An interesting and decidedly attractive bigener, of sharply defined form. The sepals are very pointed,  $2\frac{1}{2}$  in long, and tapering. The petals are oval acuminate, slightly sinuous at the apex, and, like the sepals, are rich dark crimson scarlet. The lip is long, narrow, and protrudes forward. Colour purple. A first-class certificate was awarded for it to Messrs. Charlesworth and Co., Heaton, Bradford, at the Royal Horticultural Society's meeting on October 7. The parentage is *Sophranitis grandiflora* and *Lælia purpurata*. Our illustration of a flower is from a drawing by Mr. Geo. Shayler.

**The Week's Cultural Notes.**

The flowers of *Dendrobium chrysanthum* being now over, it would naturally seem advisable to keep the plants dormant for a time; but, as a rule, they will not rest. Very often, in fact, the basal shoots are 2 in or 3 in in length by now, and the best thing to do is to place them in a good light, and keep them gently moving in the warm house through the winter. The production of roots from the stem must be anticipated, and new compost given to all that need it before this takes place. It is not a plant that likes too frequent disturbance at the root, and frequently fails to flower fairly afterwards.

A very beautiful plant now in flower is *Oncidium Jonesianum*. It belongs to the bulbous group, but its leaves, being large and vigorous, seem apparently to serve much the same purpose as pseudo-bulbs. At any rate, it is important to get each leaf or set of leaves well finished up in autumn, and as far as possible keep them quiet in winter. Although the flowers last a long time in good condition, healthy plants seemed to take no harm from their being left on, provided the roots are kept moist. When the flowers fade keep the plants in a good light, a rather cooler position, and just moist at the roots. Diminish the water supply as winter comes on, until for a week or two in the darkest days they may be kept perfectly dry.

The little repotting remaining to be done should be attended to without further delay. It will be principally devoted to autumn flowering *Cattleyas* and late plants of earlier blooming species that root at this season. The showy and beautiful *C. Bowringiana*, for instance, usually sends out a new tier of roots now or shortly, and should the compost be in a bad condition, it is better to risk the disturbance and repot now, even before flowering, than to allow fresh, young, healthy roots to enter it. The same applies to *C. labiata*, *C. Gaskelliana*, *C. gigas*, *Lælia elegans*, and *crispa*; in short, any that now show a disposition to root.

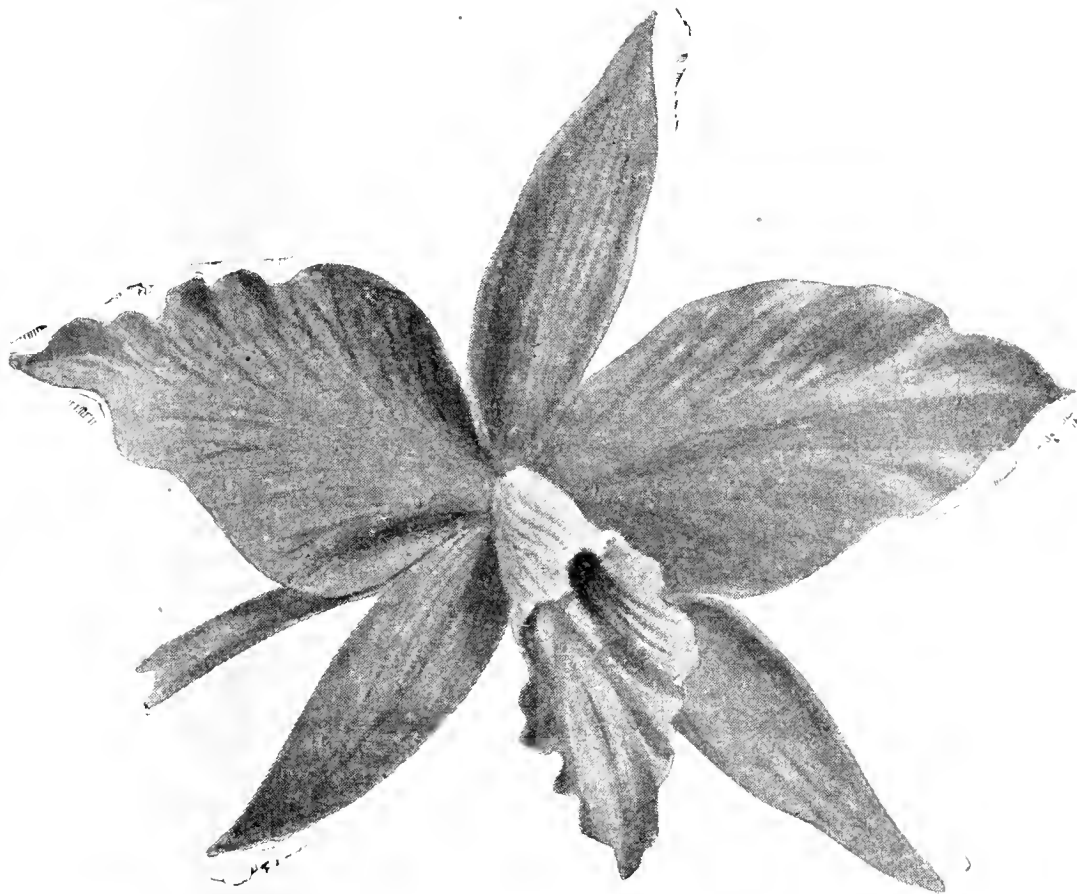
In the cool house flower spikes are rapidly advancing, and great care and watchfulness are needed to prevent the attacks of insects. Slugs and small snails are particularly fond of those of *Oncidium tigrinum*, *Odontoglossums* of the *crispum* and similar types, and others, and only by constant care can their efforts to get at them be thwarted. Search for them at night with a lantern. Trap them in hollowed out Potatoes and under Lettuce leaves. Place a little cotton wool around the base of the bulbs carrying the spikes, and when valuable varieties are concerned place these on an inverted pot in the centre of a flat vessel of water, carefully noting that no part of the plant makes a bridge over which the insects may travel.—H. R. R.

**Growing Bulbs.**

There are more ways of growing bulbs for our rooms otherwise than in soil, and at the same time good results obtained. Hyacinths, for instance, do exceedingly well if grown in moss. Fill a flower-pot half full, pressing it very tight, then place the bulb in the centre, covering it entirely and pressing the moss tightly round it. Keep it damp by standing the pot in a saucer of water and keeping it in a dark place for six weeks, after which, bringing it gradually to the light. I have seen some grand spikes obtained in this way. Narcissus also do well when grown like this and last equally well.

One of the prettiest baskets I ever saw was one filled with Snowdrops growing in Sphagnum moss. Care, however, should be taken to obtain this in a living, fresh state, as the green colour of the moss enhances the beauty of these early spring favourites. The bulbs should be planted thickly, which bloom freely and come much cleaner than when grown in soil; and I have also found them last much longer if kept cool. *Scilla Siberica* also thrives well in moss, and if planted with the Snowdrops has a very pleasing effect. In growing bulbs in this way it is essential not to force them, or they are apt to come blind. Hyacinths, especially, very often fail through being kept too warm in the early stages of growth. The cooler they are kept the better and more

certain the bloom. Often-times complaints are made that the Hyacinths have only an inch or so of bloom, and gradually die off. This is invariably caused by being brought to the light before the roots have grown sufficiently strong, and by being placed in a warm room, causing the flower spike to appear before the leaves are any way developed. There is another cause for failures with bulbs, and that is in obtaining them so very late in the season. Many people delay buying their bulbs until the end of November, and even as late as the middle of December, which is far too late in order to obtain good results, and very often no results at all. The bulbs by this time are dried out, and as often as not only throwing exceedingly poor flowers, and sometimes none at all, causing disappointment to the grower and a bad opinion of the bulb

**Sophro-Lælia × Heatonensis.**

merchant. October is undoubtedly the best month for all bulbs except, of course, the early forcing varieties, which should be potted as soon as received from the bulb farms. There are differences of opinion as to changing the water of Hyacinths grown in glasses. I notice in one gardening paper a correspondent advises changing it at least twice a week. This, I think, is a great deal too often. If a lump of charcoal is placed in each glass I hardly think the water need be changed at all. Certainly not oftener than twice during the growing season. It should, however, be replenished as it evaporates. Supports should always be used for the spikes to avoid them falling over and breaking. Spraying with Hughes' Aphicide is also beneficial to the bloom when expanding.—H. KITLEY.

**Liverpool and the Importation of Canadian Fruit.**

A large consignment of exceptionally choice and well developed specimens of Canadian Apples has just been received by Sir Alfred L. Jones (Messrs. Elder, Dempster, and Co.). This shipment has been specially forwarded to Sir Alfred by a Minister of the Canadian Government, with the object of demonstrating the rapid advance that the Dominion is making in the cultivation of choice fruits. The following varieties are included in this shipment:—Twenty-Ounce Pippin, Northern Spy, Ribston Pippin, Blenheim Pippin, Emperor Alexander, North Star, Gravenstein, and Wealthy, &c. These extraordinarily fine Apples have been entrusted by Sir Alfred Jones to Mr. Thomas Dowd, fruiterer, of Moorfields, by whom they will be exhibited during the next few days.



# NOTES & NOTICES

## Irish Wild Fruit.

Just now the business of gathering Blackberries and Crab-apples for the English markets is being vigorously carried on in the South of Ireland. A great demand exists for these articles owing to the scarcity in the fruit supply in this country. Tons of Blackberries and Crabs are being picked every day by the gatherers, who scour the hedges all over the country. No doubt later on Crab-apple jelly and Blackberry jam, "Irish brand," will be very plentiful and popular in England.

## Irish Fruit Preservation.

Under the auspices of the Department of Agriculture and Technical Instruction for Ireland, and with the view of promoting a fruit industry in that country, a very large fruit show was last week held in the concert hall of the Cork International Exhibition. Splendid samples of Irish grown fruits were sent from every county, in competition for valuable prizes offered by the department. A section was set apart for preserved fruits of Irish growth, and Mr. J. E. Austin, of Kingston-on-Thames, had the honour of being sole judge of these exhibits.

## Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, November 4, in the Drill Hall, Buckingham Gate, Westminster, 1 to 4 p.m. A lecture on "The Dietetic Values of our Common Vegetables" will be given at 3 o'clock by the Rev. Prof. G. Henslow, M.A., V.M.H. \* \* At a general meeting of the Society held on Tuesday, October 21, thirty new Fellows were elected, amongst them being Lady Owen Roberts, the Hon. Mrs. Wood, Col. Henry Moore, and Col. F. B. P. White, making a total of one thousand and five elected since the beginning of the present year.

## Newport (Mon.) Gardeners' Association.

The usual meeting of the above society was held on Wednesday, October 22, when Mr. W. E. Lewis read a paper on "The Culture of the Eucharis." Mr. Lewis, who is a successful grower of the Eucharis, gave a very interesting account of his manner of treatment, giving instructions as to potting, soil, temperature, &c., also that it required most careful watering, and not to overpot, once in four or five years being often enough after they are in 10in or 11in pots. Mr. Lewis also gave instructions as to shading, resting, &c., and bringing them into bloom at certain specified dates, as they are required. A good discussion followed, in which Messrs. Kenward, Harris, Duff, Jones, Powell, Daniels, and Reece took part, and many questions were asked. Mr. F. S. Daniels presided over a good attendance of members.—J. P.

## London Dahlia Union.

The undersigned write as follows:—"We have the pleasure to invite your attendance at a meeting of supporters of the above to take place at the Royal Aquarium, Westminster, on Tuesday, November 4 (the first day of the Great Exhibition of the National Chrysanthemum Society), at four o'clock p.m., in the Gallery Dining-room. A statement of receipts and expenditure duly audited will be submitted, and a report from the chairman and secretary to the effect that they have arranged with the directors of the London Exhibitions, Limited, Earl's Court, West Kensington, for the exhibition of the London Dahlia Union to be held in the Prince's Hall of the Exhibition, on Wednesday and Thursday of the third week in September. The directors of the Earl's Court Exhibition have met the suggestions of your chairman and secretary in the most liberal manner, and it is certain that a very fine exhibition may be anticipated. The London Dahlia Union has done much to popularise the Dahlia among all classes by holding exhibitions of a high character in a place of popular entertainment, and thus have been the means of interesting thousands in the Dahlia and inducing many to cultivate and exhibit it. Requesting the favour of your presence and also your support of the union in maintaining its most successful career.—JOHN GREEN, Chairman; RICHARD DEAN, Secretary.

## Chrysanthemums at Westbury.

In his notes on Chrysanthemum maximum and latifolium varieties, as seen at Messrs. Isaac House and Son's nursery, near Bristol, our correspondent on page 382 last week, named Margaret Marwood as one of the freest flowering and best sorts. This is incorrect, and indeed there are far better varieties than the one named. It might well be omitted from collections.

## A Unique Society.

The employés of Thomas Meehan and Sons, Inc., Germantown, Pa., U.S.A., who for some time have been studying botany at the nursery office, have formally organised a horticultural society. Constitution and bye-laws were drawn up and adopted. The society will be known as the Thomas Meehan Horticultural Society, so named in honour of the late Thomas Meehan, one of the most eminent botanists of his day.

## A Weeping Ash.

I enclose photos showing winter and summer state of one of our two trees of Weeping Ash. Being the largest specimens which I am acquainted with, I thought probably your readers might be interested in them. I have just measured the height of the one illustrated, which is 40ft high; spread of branches, 70ft; bole at 4ft from the ground, 8ft in circumference; age, about 120 years. One peculiarity about these trees is their quickness in putting on their summer garb and assuming such denseness of foliage in a very short time. The same quickness is observed in casting their foliage; they are now perfectly green, and at the first frost we get it will in a few days denude them of all foliage. The photograph was taken by Mr. Fairbairn of Nostell.—J. EASTER, Nostell Priory Gardens.

## Patent Potato Digger Trial.

The Battersby Patent Potato Digger and Gatherer is a very handy machine, which, on trial on the 24th on Lord Wenlock's Menagerie Farm at Escrick, dug up and stored in hampers about a cart-load and a half of Potatoes in four and a half minutes. It marks a distinct advance upon the ordinary digger. The advantage the new machine has over the ordinary diggers is that it shoots the Potatoes into hampers, which can be easily emptied into a cart, whilst the others, scattering them over the surface of the land, require a large number of followers.

## Potato Growing Experiments.

Mr. W. L. Hutton, the respected proprietor of the "Ormskirk Advertiser," offers special prizes at the Liverpool Fruit and Root Show for the newer varieties of Potatoes. The following season they are cultivated in the best possible manner with a view to their being recorded for the benefit of the public at large. Ormskirk, Lathom, and Aughton (the trials taking place at the latter place) are amongst the best centres in England for Potato growing, so that the notes of trials just published will be of much interest to all readers, and more especially to those who market them, and for which more particularly the trials are conducted. Mr. Henry Jenkinson has had sole charge during the season, the weights being as follows:—

|                             | Weight of seed. | Weight produced. |        |           |
|-----------------------------|-----------------|------------------|--------|-----------|
|                             |                 | Large.           | Small. | Diseased. |
|                             | lbs.            | lbs.             | lbs.   | lbs.      |
| Empire .. .. .              | 2               | 9                | 1      | 0         |
| Pioneer .. .. .             | 3               | 92               | 5      | 1         |
| General Buller .. .. .      | 2½              | 18               | 2      | 3         |
| Uncle Tom .. .. .           | 2½              | 6                | 1      | 0         |
| Empire .. .. .              | 2½              | 38               | 2      | 0         |
| Duchess of Cornwall .. .. . | 2½              | 61               | 3      | 1         |
| Pioneer .. .. .             | 2½              | 79               | 3      | 1         |
| Royal Kidney .. .. .        | 2               | 53               | 2      | 0         |
| Charles Fidler .. .. .      | 2½              | 46               | 6      | 0         |
| The Doctor .. .. .          | 2½              | 43               | 2½     | 0         |
| General Gatacre .. .. .     | 2½              | 45               | 2      | 0         |
| Charles Fidler .. .. .      | 3               | 16               | 3      | 1         |
| Charles Fidler .. .. .      | 2½              | 63               | 4      | 1         |
| Pioneer .. .. .             | 2½              | 53               | 3      | 1         |
| Enterprise .. .. .          | 2               | 39               | 2      | 0         |
| Charles Fidler .. .. .      | 2½              | 31               | 3      | 0         |
| Winmarleigh .. .. .         | 2½              | 21               | 1      | 0         |
| Edward VII. .. .. .         | 2               | 12               | 1      | 0         |
| Charles Fidler .. .. .      | 2½              | 52               | 3½     | 0         |
| Charles Fidler .. .. .      | 2½              | 78               | 6      | 1         |
| Charles Fidler .. .. .      | 2½              | 56               | 3      | 0         |
|                             | 50½             | 901              | 59     | 10        |

From the above it will be seen that several lots of certain kinds were planted, Mr. Hutton receiving them from the show and undertaking their planting. Pioneer leads the way, followed by Charles Fidler and Duchess of Cornwall, each variety being of good table quality.—R. P. R.

**Streptocarpi from Feltham.**

Messrs. J. Veitch and Sons, Limited, of the Royal Exotic Nursery, Chelsea, S.W., send a selection of their winter flowering Streptocarpi. The scapes bear half a dozen flowers in many of the varieties, the blooms resembling in shape those of the Achimenes. The variation in colour ranges from spotless white to deep blue and maroon, having red, amaranth, crimson cerise, blush and pink shades within these limits, which makes these plants very valuable for the winter season. They respond to good culture and flower freely. The Streptocarpi (Streptocarpus) are now in full bloom at Messrs. Veitch's Feltham branch, and promise to remain so over Christmas; in fact, there is little difficulty in having blooms continuously for nine months in the year.

**Cardiff Gardeners' Association.**

On Tuesday, October 21, a meeting took place at the Grand Hotel, when Mr. C. E. Collier presided over a large gathering of members. Mr. R. W. Treseder, F.R.H.S., delivered a highly interesting lecture entitled, "Budding, Grafting, and Layering." Several specimens of buds and grafts were brought to the meeting, which the lecturer used by way of making his subjects more easily understood. After speaking for over an hour, the debate was very lively and interesting in the extreme.

A very cordial vote of thanks was accorded Mr. Treseder for his splendid lecture, to which he suitably responded. Five new vice-presidents were enrolled and several ordinary members.—J. JULIAN.

**A Liverpool Improvement.**

The barricades are up, and an army of workmen now occupy the space of ground where some few years ago stood St. John's Church, and which after its demolition was converted into an open space for the people. Since then a more ambitious scheme has suggested itself and been passed by the City Council, and in the near future there will rise—with the magnificent St. George's Hall as a background—a splendid terrace garden, with sufficient space to accommodate the statues of Liverpool's worthies for many years to come. The cost is great, but with the fine classical building aforementioned, the Walker Art Gallery, Pieter Lecture Hall, Museum, and the grand Technical School lately completed, all alongside, it is only fitting that the Parks and Gardens Committee, of which Alderman J. Ball is so conspicuous a chairman, should see that horticulture played its beneficent part. In so central a position, the improvement should be gladly appreciated.—R. P. R.

**Hull Horticulturists.**

The annual general meeting of the Hull and District Horticultural Association was held in the Oddfellows' Hall, Charlotte Street, on October 21. In presenting the annual report, the general secretary (Mr. J. F. Posthill) said that during the half-year ending October 21 the ordinary monthly meetings had been well attended, and the discussions thereat had been very profitable to the members. The committee wished to publicly acknowledge the services of Messrs. F. Judson (chairman), G. Coates, J. O'Donoghue, and A. C. Tattersall during the past session. The annual exhibition was held on September 10 and 11, and, though there was a deficit on the working, they had every reason to congratulate themselves on having organised such an attractive show. The exhibits were consistently good, and in the opinion of competent judges the show was the best that had been held in Hull for many years. The numbers of exhibits and entries were respectively 15 and 213 in excess of those at this year's Yorkshire Show. There was a considerable increase in the number of members. Six months ago the hon. members numbered 16, and the ordinary members 123; but they began the new session with 31 hon. members and 157 ordinary members. The report was unanimously adopted. Some of the officers elected were: Chairman, Councillor Raine; vice-chairman, Mr. J. T. Barker; hon. treasurer, Mr. G. H. Horsfield; hon. secretary, Mr. J. F. Posthill; auditors, Messrs. W. E. Sanderson and Rymer; hon. librarian, Mr. H. Franklin; trustees, Messrs. R. Arksey, W. Pockley, T. Jaggard, and W. Stephenson. It was decided to increase the subscription of membership from 2s. to 2s. 6d. Several minor alterations in the rules of the association were decided upon.

**The Journal's Rose Analysis.**

The annual Rose analysis prepared for the *Journal of Horticulture* by Mr. Edward Mawley, will be published about the second week in November. This note is intended as an answer to numerous inquiries which have been made.

**National Chrysanthemum Society—Classification Committee.**

At a meeting of this Committee, held at the Royal Aquarium on October 7, Mr. Norman Davis was elected chairman of the Committee. It was resolved that the following two varieties, Lily Mountford and Hilda Chamberlain, be bracketed as synonymous in the Society's list of too-much-alike Japanese varieties. That the following be bracketed as synonymous in the list of early flowering varieties: Harvest Home and Cranford Beauty. That the Pompon varieties, Martinmas, La Vierge, and Vesuve, be transferred from the early flowering Pompon section to the early large flowering section. It was further resolved that the heading in the Society's catalogue, "Japanese Early Varieties," be altered to "Large Flowering Early Varieties," so as to include all types except Pompoms. That a new class be added to the catalogue now in course of compilation to embrace market and general decorative varieties other than early flowering.

**Birmingham Gardeners' Association.**

As we notified in the *Journal of Horticulture*, Mr. Lewis Castle, of the Experimental Gardens, Ridgmont, was met by a large assemblage of the members on the 20th inst. to listen to his discourse on "The Evolution and Improvement of Fruit," and in this respect it is hardly necessary to remark they were not disappointed, prepared as they also were from previous experiences of Mr. Castle's ability to deal specially with the subject in question. The subject in hand was ably dealt with, and illustrated with a numerous variety of Apples, Pears, Damsons, Crabs, &c. The lecture led to an animated discussion, in which the chairman (Mr. W. B. Latham), Messrs. W. Spinks, W. Gardiner, R. J. Hamill, C. R. Bick, and Walter Jones generally took part. A hearty vote of thanks was awarded to Mr. Castle. There was a good competition for the prizes offered by the committee for bunches of hardy border Chrysanthemums, the winners being Mr. R. J. Hamill; Mr. W. Hiron, gardener to Geo. Jackson, Esq., The Grange, Moseley; and Mr. J. Sceaney, Harborne, as in their order named. Messrs. Simpson and Son, Birmingham, were awarded a special certificate for a fine and comprehensive collection of hardy Chrysanthemums.

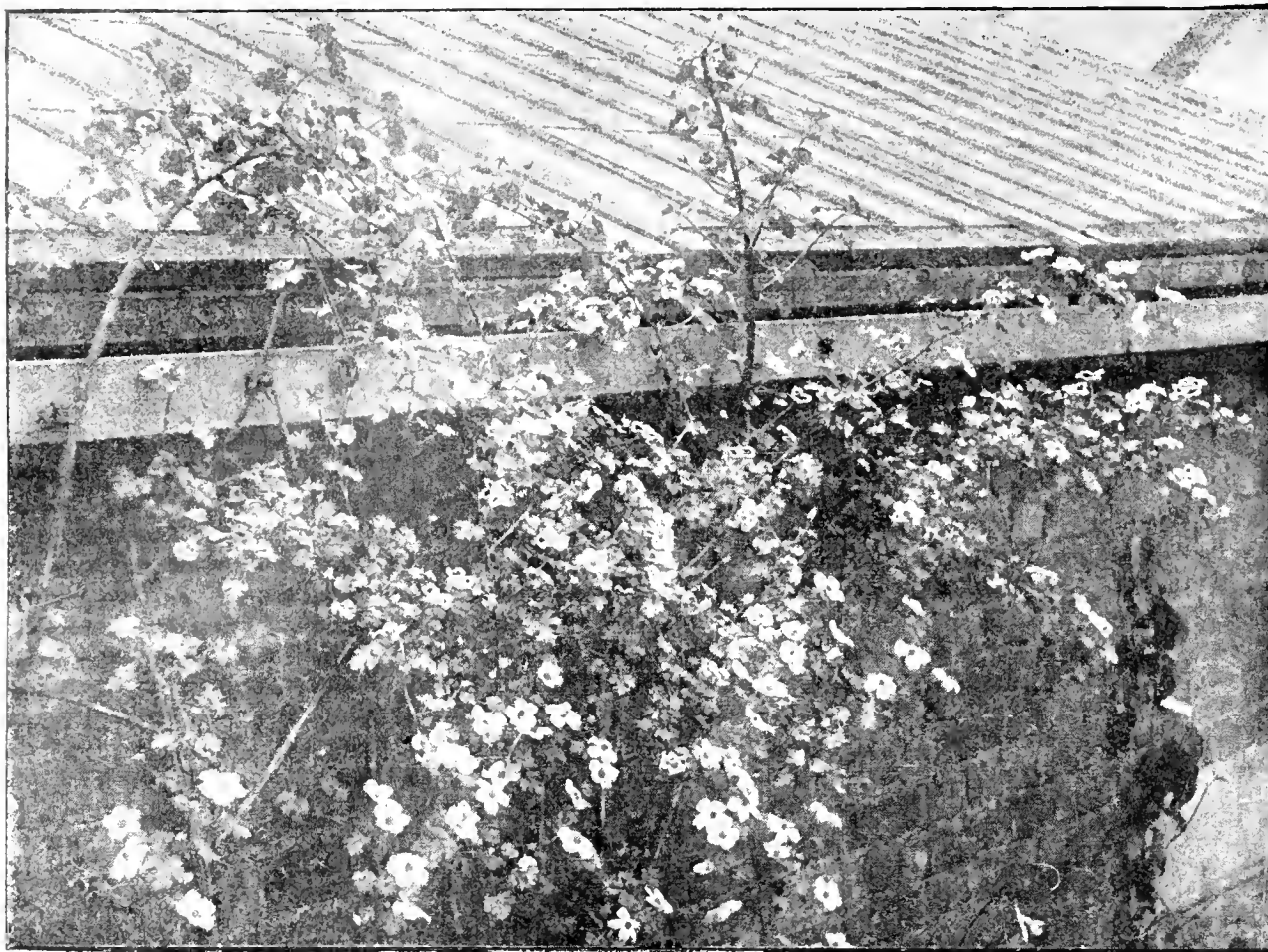
**Notes from Aberdeen.**

Taking advantage of the periodical generosity of the railway company in their reduction of fares, I recently had the pleasure of spending an enjoyable holiday in Aberdeen. It was dark on leaving Edinburgh, but by the time we reached Stirling the sun was beginning to break on the higher lands. Harvesting was general; green crops impressed us unfavourably. Turnips are in many cases a poor crop, and Potatoes showed the too well known signs of disease. From time to time thriving plantations of hardwoods and Conifers arrested our attention, and from their vigorous growth the season has not been adverse to them.

One striking feature of the landscape was disappointingly absent, and that is autumnal colouration of foliage; everywhere exhibited the dull, sombre green, unless where withered and blackened from the effects of the recent storm.

The first visit at Aberdeen was to the nurseries of Messrs. Cocker and Sons. Sunnypark, where the larger portion of the glass houses are situated, was the portion first visited. One large structure contained Liliiums in great variety, and early flowering Chrysanthemums also made a gorgeous display, notwithstanding the fact that large quantities were that morning cut for the firm's shop in Union Street, where the floral work is executed. Another house containing cool Orchids was worthy of note, the plants being in fine health, and the quantity of flowers contributed by the *Cœlogyne cristata*'s must be enormous. In a cool propagating house I noted cuttings of the newer varieties of early flowering Chrysanthemums, many of which are of Messrs. Cocker's own raising. The outdoor part of this nursery is largely devoted to the raising of seedling herbaceous plants,





*Rubus deliciosus.* (Referred to on page 409.)

with a representative collection of forest trees. This department of the nursery was at one time the chief trade, but is not now given so much attention.

From Sunnypark we proceeded to the Morningfield Nursery, which is devoted to the cultivation of herbaceous plants and Roses. Here we had the good fortune to be taken in hand by Mr. Cocker, who received us cordially, and did all in his power to make our visit as instructive and enjoyable as possible. This ground has of late years been much disturbed by the ubiquitous builder, resulting in their having to seek pastures new, and the firm has secured a tract of land sixty-two acres in extent, on the estate of Springhill, about a mile further on. An example of the inconvenience to which a nurseryman is sometimes put in this respect was furnished by the following. A portion of land containing Rose stocks with dormant buds was feued for building last autumn, and these had of course to be transplanted to another part, which was well manured at planting. Late in spring this latter portion was also feued, with the result that another transplantation had to be made, without compensation for loss of manure, labour, &c. The bulk of herbaceous plants from this ground will be moved to Springhill this winter, and when one considers the amount of plants to be treated, this is no small undertaking.

In a cool, shady part was noted a full collection of Primulas, among which was a fine lot of *P. nivalis*, a species now rather scarce. *Ourisia coccinea*, in a bed containing fine strong plants, still threw a few belated panicles of brilliant red; whilst a carpet of *Acæna microphylla glauca*, close by, suggested its adaptability as a carpet bedder. In frames were Violas in great variety, seedling Roses, *Eremurus*, and many other subjects. *Heuchera sanguinea grandiflora*, having a large spike, is valuable for cutting. *Helianthus*, *Montbretias*, *Phloxes*, *Liliums*, *Eryngiums*, *Erigerons*, *Gladioli*, *Chrysanthemums*, are all largely cultivated. Hybridisation and crossing is being pursued by those in charge.

Conifers thrive grandly in the nursery of Messrs. Ben Reid and Sons, and many of the variegated varieties of the Cypress tribe rival those from the most favoured parts of the Continent. Messrs. Smith and Son's nursery at Burnside contains a good general collection of nursery stock. Seedling forest trees appear to be their speciality. Scot's Pine, from home-saved seed, was a particularly fine crop, both at one year and two years of age.—W.

## Pears for Profit.

During recent years a great amount of attention has been drawn to the necessity for planting Apples on a large scale in this country, and when we hear of the vast amount of planting which is being done in other lands for the purpose of supplying us with Apples, it is evident that in Britain far too little has been accomplished. Pears, however, ought to claim a considerable amount of attention, and I fear they have been somewhat neglected of late. In selecting sites and localities for Pear culture, there is a less wide range than in the case of Apples, as it is necessary that cold, bleak districts should be avoided, even when the soil is suitable, because as the trees flower so early the danger from frost is great. There are, however, plenty of warm districts in which Pear culture might be made a very profitable industry. An ideal soil for Pears may be described as rather deep loam, resting on a strata of loose stones. And for strong growing varieties, such as Pitmaston Duchess and Beurré d'Amanlis, if the loam is inclined to be stiff, so much the better. One may often find a deep loamy soil resting on gravel or clay. In the former instance, satisfactory results are invariably

obtained, and in the latter case effective draining, and growing a farm or garden crop on the land for a year before the trees are planted, will bring it into splendid condition for Pear growing. Shallow or sandy soils should always be avoided, but loamy soils intermixed throughout with stones answer well. And I have seen Pears thriving splendidly in very stony soil, when the intermixed particles of earth were somewhat stiff.

It is well known that Pears need a great amount of potash, and as stiff soils yield a large percentage of this valuable constituent, it probably accounts for the success of growers who have a rather stiff soil. I am afraid the spring frosts are often blamed for a poor crop of fruit when they have had but little to do with the matter. For several years I have watched numbers of trees closely when in flower, and in some cases, although there were no frosts to injure the blossom, yet the bulk of the fruits dropped after having apparently set well, and although the soil was moist enough around the roots. This I am inclined to attribute to a deficiency of potash, and during the following autumn I intend to try the effect of a good dressing of kainit. I know in some instances long spells of very cold weather just after the fruit is set will cause young Pears to drop, even after fertilisation has been perfected, and I found that to be the case last year; but in seasons when the weather is in all respects favourable, I have noticed a similar wholesale dropping of the young fruits. If the real cause for this state of affairs can be with certainty discovered, a great impetus will be given to Pear culture.

In preparing the soil for planting the same thorough preparation should be given as that so often recommended for Apples, as without good work in this respect satisfactory results can neither be expected nor obtained. In arranging the trees I prefer to plant the standards or pyramids on the Pear stock in blocks by themselves, and those on the Quince stock in another block, instead of intermixing them, as the taller growing trees after a few years shade the dwarfs too much, and in our climate every advantage ought to be taken of sunshine.

A suitable distance apart for planting trees on the Pear stock is 30ft, and for those on the Quince from 10ft to 12ft. The Chalk Pear, which grows quickly and bears well, is excellent for planting around the outside to form a screen. In selecting varieties for market purposes a long list is not required.

The following may be thoroughly relied upon. For standards and large pyramids: Doyenné Summer, Beurré Giffard, Lammas, Jargonelle, Beacon, Hesse, Pitmaston Duchess, Williams' Bon Chrétien, Aston Town, Fertility, Eyewood, and Doyenné Boussoch. For stewing: Catillac, Verulam, and Beurré Clairgeau. Trees on the Quince stock: Souvenir du Congrès, Beurré d'Amanlis, Marie Louise d'Uccle, Beurré Bosc, Beurré Jean Van Geert, Doyenné Boussoch, Doyenné du Comice, Durondeau, Fondante de Thriot, Marguerite Marillat, Pitmaston Duchess, Williams',

and Triomphe de Vienne. The soil is this season generally in excellent condition for planting, and no time in the whole year is more suitable for carrying out such work.—WARWICK.

## Notes on the Crops.

Writing at the middle of October, one thing that strikes me is the intense greenness of everything. It is true that the Virginian Creeper on the wall has changed to a rich red tint, and the Chestnuts and a few other trees have assumed their golden mantles; but, as a rule, the changes, as yet, are slight. October this year is the month of flowers generally, and Roses in particular. According to every established rule, the queen is at her best in June and July, but never has the garden been richer in Roses. Nor is this glorious display of October Rose blooms confined to one section, for while the Hybrid Perpetuals and Teas in the garden seem to be contesting with each other to see which is the best, the old Gloire de Dijon on the house wall is bearing a full second crop of flowers, and this morning (October 16) I cut a charming Maréchal Niel.

Near to the Roses are the Dahlias, and in some places Jack Frost has blackened the leaves. Year by year the Dahlia seems to grow more popular. We owe a debt of gratitude to the raisers of Cactus Dahlias, but too much is thought of the flower and not enough of the habit of the plant. The footstalks of the blooms are not long enough or strong enough to support them in an erect position, and the new varieties in the garden are disappointing. I am also inclined to ask, Do new Dahlias last? Each year they come in ever increasing numbers to win the awards from the committees who sit in judgment over them. Then they go forth to the world and the gardens of growers, and little more is heard of them, because next year the Dahlia world is again taken up with the novelties. It would seem, then, that new Dahlias, like new Chrysanthemums, are not lasting institutions, and after a few years they slip away and are lost in insignificance.

October is the month of curiosities, and every morning almost the daily paper has odd little paragraphs telling about someone picking a dish of Strawberries, or a Pear tree bearing matured fruit and blossoms at the same time. The gardeners are used to the oddities of Dame Nature, and take little notice of them; but everybody is not, and if a little precocious Primrose on the bank sees fit to bear a few flowers this side of Christmas, sure enough some person sees the wonder of it, and sends forth the remarkable piece of information to the world through the medium of Fleet Street.

The harvest of the kitchen garden is not so satisfactory as we should like it to be, because the Potatoes are badly blighted. Most of the growers, in my district of Kent at any rate, are hard hit by the disease, and forecasts are being made that the precious tubers will be dear before the winter is over. During the past few weeks we have been busy lifting the late crop, and of all garden operations that can be fascinating or disappointing, according to circumstances, commend me to Potato digging. When the crop is good, and big sound tubers roll out as each root is lifted, your heart goes into the work; it ceases to be tiring, and backache is forgotten in the intense satisfaction that prevails. As a grower you feel that you have accomplished something, and that a share of the credit belongs to yourself; but under other circumstances all is different. When the crop is light and the lifting of the majority of the roots display three or four tubers something bigger than marbles, the most cheerful disposition grows despondent, and when in addition to this you find that nearly every respectable Potato is affected by disease, then it would require the philosophy of a Mark Tapley to keep cheerful, and, as that eminent authority would put it, there would be some credit in doing it.

The blackest mark, however, appears against Potatoes, and we have sufficient of other vegetables to stand a siege. Onions are good, and all through this summer I have never seen the trace of a maggot, which says something for the season, bad as it may have been in other respects. As I turn my thoughts from the Potatoes and survey the beds of Carrots, Parsnips, and Beet, my heart grows cheerful, and, wonder of wonders! we have been able to grow Turnips all through this summer, without continual recourse to lime, soot, paraffin, and other things that the hard-backed little "flea" takes so little notice of. All through last summer Turnips were a dead letter, but it has not been so this year, and in a healthy looking bed now we have a large stock to draw upon. Then what a season it has been for Peas, both early, midseason, and late, proving beyond doubt that the chief requisite of the Green Pea is moisture. Scarlet Runners were late in coming in, but they are plentiful still, and will be till frosts make their appearance. Celery has grown freely from the outset, and clear of maggot. We

have begun to dig, and the hearts are of that sweet nutty flavour which one rarely gets when the plants have sustained checks.

I have one dismal story to tell, however, and it relates to outdoor Tomatoes. The fact is the season has not suited them; the days have been too dull, and the nights too cold. None except strong early planted specimens have ripened their fruit outdoors, and for the most part the green fruits have hung on the plants till they fell prey to the ravages of disease. We have been taught a lesson this year, to the effect that unless Nature is liberal in the way of warmth and sunshine Tomatoes are not an outdoor crop.

Rain has been the grumble of most people during the summer, and yet at the middle of October we learn from the authorities that the rainfall has been less than the average, and people are crying out about being short of water. The fact is we have not had a real wet summer for so long that we have forgotten what they are like.—H.

## A Corsican Garden.

In many ways the trite proverbs relating to Naples and Nikko might with much aptitude be applied to that lovely garden town, Ajaccio, in La Belle Corsica, with this distinguishing difference, however, the climate is far finer than either. Save for perhaps two months at midsummer the remaining ten you may bask in a glorious yet refreshing sunshine among fragrant flowers and shrubs and cooling fruits. Indeed, such are ever present the entire winter through, the latest Grapes and Figs joining hands, as it were, with the golden Apples of the Hesperides, and forming an elegant and becoming ornament not only on terraced walks and cultivated orchards, but right throughout the main boulevards of this mid-Mediterranean palmy "citta."

I use the word advisedly, for, though French by government, the natives are Italian in speech, mien, and habit, though needless to say they prefer their title of Corsican to either other designation. In point of fact, however, they are partly descended from the Genoese settlers and partly are of Arab or Berber origin. They possess, too, a good deal of the *dolce far niente* character of the Neapolitan, the male element at least, for the women I remarked as peculiarly diligent, meeting them of an afternoon returning from work in the vineyards and Olive yards in groups together, walking briskly along with bundles of brushwood upon their heads, while those having "their daily round and common task" in the town might be seen, morning, noon, and night, doing their washing at the various watercourses, or marching erect, with huge water-pots and other weights, and bearing themselves with the gait and comeliness of the superb carriage of the women of Capri.

The almost entire absence of wind, such as a tramontane or mistral, and a total immunity from dust by reason of the nature of the soil, is not only a great boon to the sojourner at Ajaccio, but possibly is of considerable utility in producing the wealth of luxuriance which obtains in the vegetable kingdom there. Situate on the hill slopes, neither very steep nor yet on any even ground, but upon graceful undulating inclines, there stands a lovely little white château, framed as it were in a rich setting of varying hues of green, as seen from the vale below. Approaching nearer, the direct vista reveals mid its deep, handsome foliage golden balls in considerable profusion here and there in different directions. Closer still will be discerned their definite positions, as also on the outskirts a vineyard here and there, and glades of the soft-toned evergreen Olive, now (at the time of the writer's visit) in course of having its small black produce garnered in for its annual crop. And finally, as we reach the terraces, our close gaze is brought to revel in garlands of twining Tea Roses, purple and red flowering creepers, white Periwinkle peeping in and out among the bushes, and the exquisite close-growing, little blood-coloured bloom which appears largely in most Corsican gardens, but the name of which has escaped my memory. Besides much that took the fancy I was a good deal impressed by the varieties of Genista. The common yellow kind was broadcast over hill and dale, but here in this cultivated oasis on the hillside there were beautiful kinds of a white and scarlet colour. Then, too, the red Aloe in full bloom was very handsome



and striking, while immense patches of the two sweetest and most admired of the Narcissus tribe were very much in evidence. The Pepper tree also played a somewhat prominent part in this as in other gardens that I had the privilege of seeing, and attains in this sympathetic climate considerable proportions. The Prickly Pear, though to some extent a nuisance and a weed, is yet valuable all round these parts as in other indigenous countries, not only for the excellent hedges it forms, but also as regards a superior sort, at any rate, for its fruit, which the natives are usually very fond of, and though insipid for the most part, is yet presumably a wholesome and nourishing product.

An aqueduct of crystal water flowing direct from the mountains supplies an inexhaustible and ever-ready source for irrigating this charming semi-tropical garden. Many different kinds of handsome Palms, several of the Banana genus, groups of elegant Bamboos, with specimens of the Indiarubber tree and the exquisite Mimosa in the fullest flower and of noble proportions, afforded a feast liberal enough to gratify the taste of the most exorbitant of Nature's gourmands. But there was much beside and galore in variety even at this, the most dead season of the whole year. Thus a most showy and profusely scented flower was that of the tall, towering plant of the Guccorine, with spurs absolutely crowded with its large petalled orange flower, and apparently preceeding the foliage. Of Oranges several kinds of the ordinary shape were grown, which for the most part were exceedingly juicy and of admirable sweetness and flavour, while in addition the Mandarin, Tangerine, and Jaffa were each cultivated. The Almond, which comes to the greatest perfection here, was just appearing in bloom, while the Peach, Cherry, and Apricot, also largely grown, were seen plumping up their buds with an appearance of a bountiful season's crop. The soil being of decomposed granite entirely, while suited to some growths, particularly the Mimosa, is but a poor bed for many of the smaller products, whether of fruit, flower, or vegetable, and herein my friend, the kindly host and owner of this delightful residence, labours under considerable difficulties. Perhaps his fairest and most beautiful flower is his own lovely little maiden daughter of some eight summers—a perfect dream of sweetness and innocence, mingling her baby voice and lithe form with the pure delights of Nature's treasures.

I must in conclusion refer to the interesting series of plants and trees a little higher than the level of this fairy spot on the hill slopes. The line of growths in Corsica is very distinct, thus leaving behind the Olive, Plane, Eucalyptus, Orange, and Almond, we find the Holm Oak, with now and then a Cedar asserting a very large dominion, having as associates among smaller products boundless expanses of Arbutus, striking enough whether in the full glory of its large red berry or in its bridal array of white bloom, the bushes being thus variously decorated with either ornament. A tier higher the gnarled and fantastic Chestnut comes upon the scene with plenteous patches of our own so-called Christmas Rose or Hellebore helping to form Nature's varied carpet, while masses of pink and white giant Heather, rising in height to fully 6ft in places, and interspersed with the wild Mint, of a like prodigious growth, afford in their season of flowering a gorgeous but somewhat impenetrable verdure.

Still upward, and now well among the mountains we meet the Pine taking almost sole possession, with little else than scrub and certain plants and flowers, while the utmost limit is reached and found to contain the beautiful and symmetrical Beech. Not quite at so exalted a height, but yet at a very considerable altitude, and right upon the summit of a lower range of mountains stands an exceedingly remarkable building. A former duke, Pozzo di Borgo,\* in a true Corsican spirit of vendetta against Napoleon, caused to be conveyed across sea and land and up these formidable and impregnable heights a very large portion of the Tuileries itself, and formed his château therefrom. It stands out in all directions as a remarkable and unique landmark, fulfilling literally, though not in the way intended, a father's will that a certain huge sum should be expended in erecting buildings in the island, and having the most superb views both land and seaward, seeming to be a kind of sentinel guarding the Isle of Unrest, but destined doubtless when its own day and generation be past to become itself but a ruin and desolation, for "sic transit gloria mundi."—J. A. CARNEGIE-CHEALES.

\* In 1791, when Corsica was rent with the turmoil of the French Revolution, Napoleon Bonaparte and his partisans—all needy adventurers—figured as French red-republicans or terrorists in Ajaccio, while the di Borgos represented the respectable Corsican party. Pozzo was nearly assassinated by the French faction, and after Bonaparte wantonly shot down the people coming out of church the Bonapartes had their house burned and were chased out of the island utterly discredited, ruined, and destitute. The feud lasted twenty-five years. Later Bonaparte tried to catch Pozzo and shoot him, and Pozzo intrigued at all the European courts raising up enemies against the French Empire. He succeeded, for he saw Bonaparte deported to St. Helena. He subsequently represented Russia at the English and French Courts, and died very distinguished some twenty-five years after his adversary. In Corsica the di Borgos are regarded as patriots, while the Bonapartes are considered in some sense as turcoats.

## Ornamental Sylviculture.

The practice of forestry has exercised the minds of British landowners, their agents, and their foresters to a greater extent during the last few years than at any previous time. Old systems of forestry practice are being closely criticised and subjected to frequent comparisons, and even a book, "The New Forestry," was written by a leading British practitioner and published in this country in 1900, to advocate another method of treatment here. In the course of a long letter to our contemporary, "The North British Agriculturist," Mr. Jas. Farquharson, of Inverkip, Renfrew, seeks partly to oppose the new forestry, and some of his remarks on ornamental forestry are worthy of being reproduced here.

"British forestry has, at least, three distinct features of utility in so far as relates to the requirements of British tastes and ideas, and may be classed under these three heads—ornamental woods, sporting woods, and commercial woods, which marks the line of difference between British and foreign forestry. The ornamental part of sylviculture is that part which embellishes the valley and upland, the nobleman's park and mansion, sometimes picturesquely placed and sometimes otherwise; but trees in any case screen deformities, beautify the banks of lakes, rivers, and streams, and in a general way give fertility and colour, harmony and variety, warmth and protection, to the open country and its inhabitants, which delights the people at all seasons. The people glory in the beauty and variation of the woodland scenery, and the innumerable magnificent vistas along which they are free to gaze. We admire the woods in their many vernal shades, in their glory and splendour of complete summer array, in their autumnal tapestry, when the shades of spring green change to those gorgeous shades of decay, and in their winter desolation and nudity. In all aspects and states trees have each and all their own peculiar charm and fascination over the æsthetic mind. Yes, we love them; love them in all conditions and situations, in groups, in mass, as individuals, in all manner of combination and extent. Leaves on, leaves off, in the valley, on the swellings of the valley, in the hedgerow, along rural lanes and roadsides where their wide spreading rustic branches and leafy canopy shelter and shadow the way-worn wanderer. As spring, as summer, as autumn, as winter, she is lovely in any apparel in her arcadian dominion.

"Just think of the great plains of Britain denuded of trees and exposed to the fury of the winds, or the kingly palace or castle left standing out desolate and bare; a country dotted over with brick and stone houses without a tree near to give tone and colour to the art of the architect, or conceal the blemishes of bad art. That is a picture of the nude, not beautiful, too awful to behold. Trees expatriated to soils and altitudes other than agricultural will be something novel in British sylviculture. If this is the present day trend of sylviculture, then let us avoid such anarchy and disfigurement, and hold on to the old system; if it is not profitable, it is charmingly artistic. Alas! for the forestry of the new epoch if that is to be its consummation.

"Before pulling the old system of forestry all to pieces, which, peradventure, in the past was not the best system, nevertheless, on the whole, it fairly well realised all that was expected of it. Now let us pause. Let us have one last look behind and contemplate the grandeur and massiveness of the edifice we are about to pull to pieces, and say farewell for ever to, before we step over the brink into the future. Let us not destroy the ornate and picturesque in the old system of things (sylviculture) to gratify fantastic and crude ideas, whilst progressing towards a new system of things in camera, not even to please the most austere iconoclast. We will not reach Utopia so. Let us, when working to destroy an effete system, be sure that the system to be constructed is better than the system to be swept away. That is an important matter in the affairs of life, whether animal or vegetable. It is so much easier to be destructive than constructive. It is so easy to cut a forest down, it is so hard to grow one. It is so easy to knock all things to atoms, it is so hard to put them together again, or even to decently patch them. Let us conserve all that is good in the old system of sylviculture, while we appropriate all that is good and practical from Nature's system. Let the metamorphosis be slow, step by step as it were, so that when the transition is complete the change will not shock the æsthetic taste of the most fastidious connoisseur; and the fittest will survive, else Darwin is not a true philosopher.

"Individuals and nations sometimes pay enormous sums for oil paintings and other choice pictures. No price, indeed, is deemed too fabulous for a work of real art. Then why should people begrumble to pay a decent price for the upkeep of the great picture gallery of the world, universal Nature, teeming with the masterpieces of the master artist Nature? It were a pity if the ornamental part of sylviculture was to be consumed by the monetary."



### Plums.

Respecting Monarch referred to by "Wandering Willie," I have found it one of the finest of all late Plums, although this season produced a very scanty crop; but even then it scored over Rivers' Prolific, Denniston's, Transparent Gage, and Angelina Burdett, which were utterly bare. Emperor and Czar were the only fruited with me this year other than the first mentioned variety.—SQUIB.

### The Keeping Property of Fruit this Autumn.

I should greatly like to know what is the general experience of growers as to the keeping property of Apples, Pears, Plums, Cherries, Grapes, Figs and fruit generally, in Great Britain and Ireland? I am a small amateur grower with little more than twenty varieties of the first three, but I claim to be a pretty close observer, and my notes so far go to show that Apples and Pears specially, never kept worse, although kept cool and dry and tenderly handled in an open shed, and so far at a temperature not exceeding 55deg Fahr. I attribute the comparatively inferior flavour and bad keeping properties to the limited sunshine and ripening the fruit received.—W. J. MURPHY, Clonmel.

### Vegetable Pests.

I enclose a few stems of Savoy Cabbages which I believe are affected with the Cabbage root-eating fly, *Anthomyia brassicae*. The attack is very general this season over a wide area of the Cabbage growing district of Ormskirk (Lancashire), where every farmer grows some. Almost every grower is more or less affected. The field from which the roots were drawn is about seven acres in extent; it was Oat stubble ploughed up last autumn and winter, or rather early spring, worked in the usual way; there had not been a previous crop of the Brassica family on the field for at least a generation; the farm is a large one.

At planting out time it was given a liberal dressing of what is known as Yankee Manure, that is, manure that is taken from cattle boats plying between Liverpool and America. The supply running short, the last acre had to be planted without manure. Drills were drawn out the usual distance—28in apart—the manure spread at the bottom, then covered up, and the plants set out about 18in apart. The seed was obtained from a neighbouring farmer and was home saved, and the plants were all taken from the same seed-bed. I may here mention that it is the custom of the growers to go over the entire seed bed, drawing all the plants of an even size first, then following on with the smaller plants afterwards.

Now for results. The first three acres or so that we planted are a good healthy lot, the remaining portion of the field are very irregularly affected. There will, perhaps, be a patch of two or three drills wide for twenty yards or so on which there is only one here and there any good, followed by about half a dozen healthy plants, and so on through the remainder of these drills. Next will come a fairly good drill, perhaps only to be followed by a couple that are equally as bad, so that the last four acres of the field may be described as patchy. There is no difference perceptible in the attack on the portion that had no manure from the rest of the field, but there is a marked difference in the growth of the unaffected plants growing on two portions. When asked, I told the farmer that probably the first lot had got a start into growth with little or no check, perhaps having had the benefit of a shower when newly planted, thereby enabling them to resist the attack of the grub, as he calls it; whereas the others may have had a check from want of rain. I had that theory soon knocked on the head by the experience of another farmer whom I afterwards met; he said his plants got away splendidly after being planted for some time, then suddenly they turned a bluish colour and fell over on their sides if touched. I thought I had found an explanation of the cause in this way; this fly is very similar to the Onion fly in its habits. Now it is a well-known fact to many gardeners that if they thin out their Onions in dry, hot weather they are simply courting an attack of fly if the ground be at all strong. I thought the fly here got a foothold after the first lot of plants had been drawn, and my idea was strengthened by farmer No. 1's plants of the first "pulling" being all right; now farmer No. 2 said his first "pulling" were the worst, the latter lots not being so badly affected. Strange to say, it is the early Savoy that are

the worst, the later kind and Cabbage and some Cauliflower are not so badly affected.

I am afraid it is too late now to check the evil, the plants being too far gone; but can you suggest anything to prevent a recurrence of the attack next season?—JOHN RYLAND.

### October Chrysanthemums.

Unlike "H. D.," I have not found Market White fade to any extent after cutting. I have used the blooms for buttonholes considerably, and for the purpose I class them as very fine. Its purity, fine form, and size make it a variety that will take some beating.—T. W.

### Fruitless Forest Trees.

I observe that the Eastern and Western Planes, Oaks, Horse Chestnuts, and Spanish Chestnuts are practically without fruit this year. I have also particularly noticed that numerous of the latest partially developed leaves on several large old trees of Planes in this district were shrivelled up, apparently owing to late frosty weather; the Fir and Larch trees which are grown hereabouts are also devoid of cones this year. Probably such an unusual general absence of fruition of the above subjects in this district was owing to the inclemency of the late spring weather. Strangely, however, such as the Filbert, Cob, and other varieties of Nuts have never been known to be more abundant.—W. G., Harborne, Birmingham.

### A Seedling Carnation.

I send to you a bloom of a seedling Carnation raised by one of my men here, Holland, Sussex. It is a Tree, and I have named it Lady Betty. As you will see, the colour is very much the same as Joliffe, but the bloom is larger, more compact, and altogether a great improvement on that variety; also it is clove-scented. Kindly give me your opinion of its mercantile value.—C. H. MATHEWS.

[The flower was so withered from having been packed in dry tissue paper, in a very small box and with a short stem, that its merits could not be correctly gauged. The colour is pleasing, fragrance delightful, and size fair; it also has a good calyx, and generally seems strong. Its mercantile value will depend greatly on its floriferousness and vigour. A trade grower would be better able to inform you on this point.—ED.]

### South African Gardening.

In your issue of September 4 last, an interesting article appears on "South African Market Gardening;" and, of course, the Rand is the principal centre of attraction. No doubt there is, and will continue to be, a great demand for fresh vegetables in Johannesburg if the population continues to increase as it is doing. I shall quote a few instances of the prices given for vegetables at the market there: Three Cauliflowers, 13s. (but that was exceptional); three Cabbages, 7s. 6d.; Lettuce, 3d. each; Leeks, 4d. each; Turnips, 4d. each; Onions, 3d. each; Green Peas, 1s. per pound. This sounds well, and better too, if digested with the article mentioned beforehand. Mention is made about cheap labour, viz., natives at 15s. a month and some cheap food allowed. I should like to see the grin of the Kaffir or the independent look of the Coolie when such a wage was offered him. No, do not expect that, but be prepared to pay, at the lowest, from £3 to £4 10s. a month with rice for the Coolie, and mealies and some meat for the Kaffir. Then another important point is that the prices above stated for vegetables are procured at the worst time of the year for production. I mean winter and early spring, when, to produce these vegetables a plentiful supply of water must be under control, and, further, nearly all, if not all of the springs are already commandeered outside the Rand, principally by the Portuguese, who work from early morn to night, and at a lower wage than Englishmen would care to work for. Of course, that matter can be easily remedied by going twenty miles or so out of town; but there is a need for more railways throughout the land to convey the produce to the towns. At present much of the produce comes from Natal and Cape Colony, but fresh goods undoubtedly take the highest price. The postscript by the editor after the article gives a true account of the land, the climate, and the difficulties to be met with. To anyone having a mind to come and start market gardening at the Rand, kindly take a hint and have a good supply of money to fall back on; if you don't do so, you will find out your mistake when it is too late, as fortunes can be lost and made here in market gardening as well as at home.—S. A., Johannesburg.





#### *Helianthus rigidus.*

Taking everything into consideration, I am inclined to call it the best of the Sunflowers. Here in the garden it has been in bloom for two months at least. I do not think it is as generally known as it deserves, for we have sent out a great many plants of it in the last six years to people who saw it here for the first time.—B.

#### *Pinus Ponderosa.*

Thus, the Bull Pine, Rock Pine, or Black Hills Pine, as it is popularly known, is the best native Pine in N. America, and does well in Great Britain. It is common throughout the Rocky Mountain region and Nebraska. A form of it is also found in the Eastern States, and is now called *Pinus ponderosa* var. *scopulorum*. The type is a beautiful stately tree attaining a maximum height of about 300ft, and a trunk diameter of 15ft. With its beautiful long deep green needles and straight body, it makes one of the finest evergreens for planting on dry hillsides or uplands, and it does not seem to attract the insect now so destructive to the White Pine, *Pinus strobus*. If the tree is nursery grown and has been subjected to judicious root pruning, it is not hard to transplant and should be used a great deal more than it is.

#### Suspension of Life at Low Temperatures.

In a paper by Professor Allan Macfadyen and Mr. Sydney Rowland, read at the recent conference of the British Association, the suspension of life at low temperatures was discussed. Experiments were made with organisms possessing varying degrees of resistance, ten organisms altogether being used and cooled down to — 190deg C., in the first instance for twenty hours, and eventually for seven days. These exposures did not produce any appreciable impairment in the vitality of the organisms, either as regards their growth or their characteristic physiological properties, such as pigment and gas production, pathogenicity, &c. Amongst the organisms tested were photogenic bacteria, and these likewise preserved their normal luminous properties. The authors were able, through the kindness of Professor Dewar, to apply a still severer test, namely, an exposure to the temperature of liquid hydrogen (about — 252deg C.), a temperature which was far removed from that of liquid air as was that of liquid air from the average summer temperature. Ten hours' exposure to this temperature had no appreciable effect on the vitality of the micro-organisms tested. At such temperatures it must be assumed that the chemical metabolism of the cell ceased, in the absence of heat and moisture. At the same time, it appeared advisable to test the influence of a prolonged exposure to low temperatures on the vitality of cells. The experiments were conducted with the aid of the liquid air plant at the Jenner Institute of Preventive Medicine. The bacteria were suspended in small loops of platinum wire or on cotton-wool swabs, and directly immersed in the liquid air. The yeast, washed and pressed, was wrapped in rice-paper, and likewise directly immersed in the liquid air. Samples were taken and tested at intervals for a total period of six months. In no instance could any impairment of the vitality of the organisms be detected. Judging by the results, the experiments might have been prolonged for a much longer period than six months without appreciable influence on the vitality of the organisms in question. The ordinary manifestations of life ceased at zero, but at — 190deg C. they had every reason to suppose that intracellular metabolism must also cease, as a result of the withdrawal of two of its cardinal physical conditions, heat and moisture. It was difficult to form a conception of living matter under this new condition, which was neither life nor death, or to select a term which would accurately describe it. It was a new and hitherto unobtained state of living matter—a veritable condition of suspended animation.

#### *Sophora japonica.*

This lovely tree does not flower freely in this country. The flowers are borne in great bunches, are cream white in colour, and in seasons like last summer, when the bunches of bloom are abundant, it is one of the most attractive of midsummer flowering trees. It is a native of Japan, and belongs to the leguminous order of trees. It is slow growing at first, and one has to wait some years for a specimen to flower, but when old enough and it commences to bloom, it continues to do so every season. In favourable seasons the seeds ripen, but at all times they are easily had from dealers in Japanese seeds, and they germinate readily when fresh.

#### *Viburnum Opulus nana.*

Some years ago a pigmy *Viburnum* was introduced, a miniature form of the common *Viburnum Opulus*, and, though now fairly distributed, it has never been reported as having been observed in flower. But it has good qualities enough without this; and anyone looking for a dwarf, bushy shrub, of but a foot or so in height, would find just what they require in this plant. When raised from cuttings—and it roots easily—it takes as many as a half-dozen years before it is a foot high, but all the time, from the start to the end, it is as bushy as a plant can be. It is all the time as broad as it is high, and as thick as it can be, the branches are so numerous. For a dwarf boundary hedge it is one of the best plants going; and it is among the hardiest of plants.

#### *Kerria japonica.*

That the public does not tire of good things is evidenced in the case of the old *Kerria* or *Corchorus japonica* (writes Mr. Meehan in an American journal). In this vicinity it is one of the oldest of garden shrubs, and it is just as much in demand to-day as any of the newer shrubs. It deserves to be; for besides its wealth of yellow flowers in early spring, there is hardly a day throughout the season when a flower could not be had from it. The kind always looked for when a *Kerria* is asked for, is the double-flowered one, as it has so long been familiar in gardens: but there has appeared of late years the single-flowered sort and a variegated leaved one of the single, both free flowering and in many ways desirable. Those having plants, and wishing to increase them, could put in green wood cuttings at this season, and in winter make cuttings of the hard wood, planting or setting them outdoors when spring came.

#### *Bougainvillea Sanderiana.*

After potting *Bougainvillea Sanderiana*, plants that have been lifted from the open ground, where they have been in sub-tropical bedding, should be placed in a greenhouse lightly shaded, at a moderate growing temperature for about ten days or so, spraying them over the top daily, until they have recovered from the effects of the lifting. After this has been accomplished reduce the temperature to a sufficient degree to prevent the plants from making new growth. Clean off all shading, expose the plants to the full light, and always keep them on the dry order throughout the winter, when the plants will have well ripened and fully budded up. About six or seven weeks before Easter move the plants from their dormant position into the forcing house, give them plenty of water, and expose them to the full light. If these directions are carefully followed, there should be no trouble whatever in blooming these plants in profusion.

#### Planting Deciduous Trees.

Now that November is almost here, it is much better to proceed at once with the planting of deciduous trees than to wait longer. The leaves are still on the trees, and these have to be handstripped before the trees are shipped or planted; and quite some time is occupied in stripping even one large tree. But even if the customer should have to strip the leaves himself, he had better set out the trees. Many years' experience, writes Mr. J. Meehan, has shown that early planted trees do far better than those set late. There is root action at once if set while the ground is still warm. Should the soil be dry, so much the better for planting, as it can be worked in around every root closely. But when the hole is half filled up, drench it with water, filling up the hole later when the water has thoroughly soaked away. It is much the better way to set out trees early in the autumn than in the spring. The trees do better, and there is less need of hurry.

## Botanic Gardens.

(Continued from page 381.)

The mode of arrangement of botanic gardens varies much in detail, yet more or less faithfully reflects the state of scientific knowledge and of horticultural and general taste at the period of its foundation or reconstruction, hence we see the advantage of more modern botanic gardens. The Linnean system of arrangement of the plants has, of course, now been replaced by the natural system, but in their mode of expressing this, few gardens agree. In some, the arrangement of the plants according to their geographical distribution is followed, while economic and medical interests have had a place in others.

The grouping of plants as trees, shrubs, perennial herbs, annuals, aquatics, &c., is generally followed. The best garden may be taken as that which best combines all these advantages and reconciles them with the respective claims of simplicity and beauty, yet no garden is complete without its herbarium, library, museum, its laboratories for research, and its lecture rooms for teaching purposes. A botanic garden is concerned with the introduction of new plants and their distribution to other gardens, public or private, and to new countries, and thus requires a colonial and international organisation of exchanges and correspondence.

The advantage to horticulture by the establishment of such gardens was of the first importance. No plant can be cultivated with success unless its native climate, soil, and habitat are taken into consideration. This, and much more is considered in a botanic garden where plants are associated in cultivation. National establishments of this kind have the power both by a command of foreign intercourse and liberal funds to collect specimens of new or rare plants from other countries, especially such as have been little explored.

Here the man of science can pursue his studies under favourable circumstances otherwise unattainable, in ascertaining the relationship of individuals, comparing dubious species, witnessing their state at different periods of growth, as well as the soil and situation that suits them best. It forms a natural centre for the preparation of scientific travellers, and the training of gardeners, foresters, &c., while it owes service both to medical and general education.

The earlier botanic gardens consisted necessarily of plants grown in the open air. Indoor cultivation did not commence till about the middle of the seventeenth century. The greenhouse and hot-house in the Chelsea Physic Garden were probably the earliest erected in this country. The cultivation of herbaceous plants in the open air or with merely winter shelter in frames still remains one of the most important features of botanic garden work. Where the great aim is to get together as large and representative a collection of plants as possible, so that people may see them in a living state, features of special plants are sometimes made, such as Orchids, Ferns, Succulents, Alpines, Aquatics, or trees and shrubs, or special prominence may be given to plants used in medicine, arts, or manufactures, or such as provide food in any shape or form. Experiments and tests are often carried on and the results published in the various scientific journals. For the full performance of all these varied functions, the resources of a great botanic garden are never too ample. It is important to note that for the purpose of teaching, a much smaller one, illustrating all the chief natural orders, or the plants used in any particular industry in the neighbourhood, or the plants of the county or those that are native of

one's country, could be easily grown at trifling cost, and within very narrow limits. Several such small gardens have been established recently in the United Kingdom, as, for example, at St. Andrew's University, Yorkshire College, Leeds, and at Aberdeen.

Some of our large schools, too, possess them now, and others, I am glad to say, are in contemplation. Those already established have been followed by most beneficial results. Most universities, cities, and large towns of foreign countries have their botanical gardens.

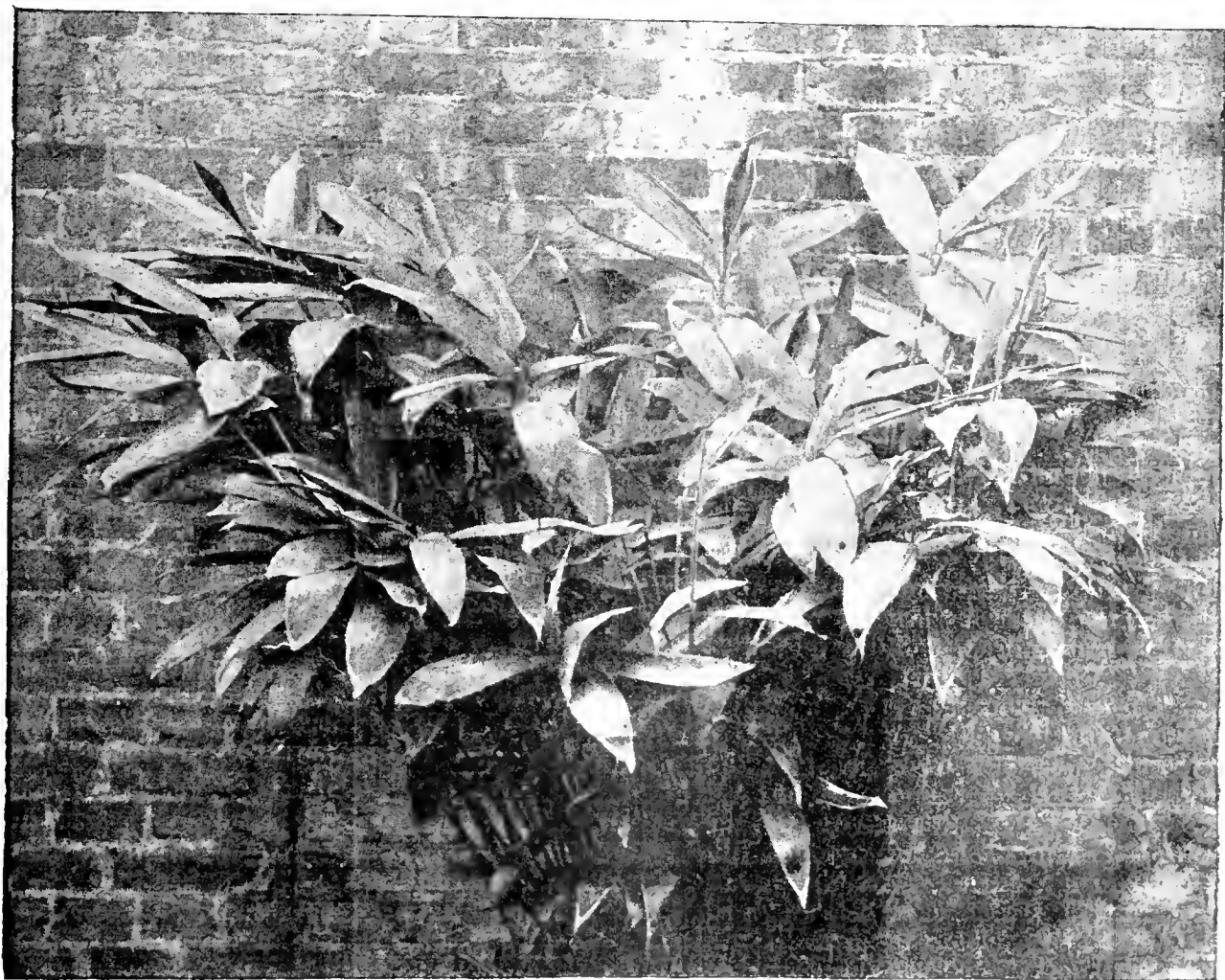
Most botanic gardens issue annually a list of the seeds collected from the plants grown. These are available for exchange. This is very useful, not only in keeping up a general collection, but also when any particular genus or natural order is under consideration.

I will now give a brief account of the following botanical gardens:—Kew, Edinburgh, Glasnevin, Cambridge, Oxford, and the Chelsea Physic Garden.

### The Royal Gardens, Kew.

Kew is popularly known as a great botanical institution, possessed of a garden wherein is grown the most comprehensive collection of plants ever brought together in any country. Her influence in science and commerce has long been acknowledged as pre-eminent among botanical establishments. Kew is also a great training school for gardeners, but the important part she plays in horticulture has not until recently been recognised. Kew men are everywhere, as directors, curators, superintendents, head gardeners, foremen, nurserymen; and as editors and assistant editors on the horticultural press, as botanists—Fellows of the great scientific societies.

The term for employment at Kew has been limited to about two years, in order to give a large number of young men an opportunity of gaining experience there. There is a well-stocked library of books on botany, horticulture, and kindred subjects. Courses of lectures are now given on the following subjects:—Economic botany, geographical botany, descriptive and systematic botany, and physics and chemistry. There is also a British Botany Club for field



*Bambusa palmata.* (See page 409.)

work during the summer months. The director grants two half holidays, so that the members may go further afield. These outings are generally conducted by one of the



members of the herbarium staff, and are much appreciated. Prizes are given at the end of the year for the best collections.

In the long winter evenings the Mutual Improvement Society meets, when essays are read by members; or occasionally one of the officials gives a lecture, when there is sure to be a good gathering. These essays and lectures, together with the debates, are a great boon to the young men, coming, as they do, from all parts of the country. Then the daily employment in the care and cultivation of the collections furnish the practical experience so necessary to all good gardeners. Three-quarters of an hour one day in each week is allowed after breakfast, so that the young men may have an opportunity of visiting different parts of the garden to see what plants are in flower, or what work is in progress, the extent of the collections, &c. This also gives the young men a chance to see any particular department or class of plants they may be specially interested in. It must be obvious to everyone that such an arrangement is the only one possible to enable those employed to keep in touch with the working of such a large garden as Kew. There is also a cricket club, which is very popular as a recreation, good for body and mind. All these advantages, and the mingling of men from all parts of Europe, is bound to have a powerful influence in the training of the young men employed there.

Kew, as a garden of any pretensions, was founded in 1739 by Augusta, Dowager Princess of Wales, the mother of George III. Its area was then nine acres, and it was superintended by William Aiton, who had been trained by Philip Miller in the Physic Garden at Chelsea, which was the Kew of that period. Under Aiton's management and with the aid of Sir Joseph Banks, the garden increased in size and interest until about the year 1800 it was famed throughout Europe for its great collection of plants. We may therefore reckon that Kew has been a great training school for over one hundred years.

In 1840 there was a strongly expressed desire throughout the country that the garden, which at that time belonged to the Royal Family, and was but a private garden, should be placed on a different footing and rendered available as a great instructive and scientific establishment for the advantage of the public. Dr. Lindley, a great horticultural teacher as well as botanist, recommended that Kew should be made a National Botanical Garden, and maintained by the Government.

Kew is now all, and a great deal more, that Dr. Lindley recommended. Its present area is 250 acres, the greater part of which is planted with trees, shrubs, and herbaceous plants. There are about forty plant houses, including the great Palm house, and the much larger Temperate house or winter garden recently completed, and numerous propagating pits and frames, besides three large museums and a picture gallery of good paintings of plants in their native country by the late Miss M. North, and the finest herbarium of dried plants in the world. The present staff numbers about 170, of which sixty are gardeners. The collection of cultivated plants amounts to about 20,000 species, of which 6,000 are hardy herbaceous and Alpine plants (including hardy bulbous plants), about 3,000 are hardy trees and shrubs.

The first printed catalogue of the plants grown at Kew in 1768, entitled "*Hortus Kewensis*," consisted of 458 pages, and reckoned to contain 3,389 species, of which 2,712 were herbaceous and Alpine, including Ferns and bulbs, and 488 were hardy trees and shrubs. Lists of the collections now cultivated at Kew may be obtained at the gates. These catalogues are extremely valuable to all growers of plants. The Botanic Garden, which was opened to the public in 1841, with Sir William Hooker as director, comprised only eleven acres. In 1847 another forty-seven acres were added by permission of the late Queen for the formation of a Pinetum, but this was too near the London smoke, and soon lost its distinctive character, although a few of them have lingered, and are now good specimens.

The present Arboretum (also known as the Pleasure Grounds, as it was formerly used for sporting purposes by the King of Hanover) was commenced in 1870, and consists of about 3,000 species of trees and shrubs. The great object of Kew is to grow all the best and most interesting plants from all parts of the world, and to make a good display of ornamental gardening; but unlike a University botanical garden, they are not bothered with the growing of large quantities of material used in the teaching and for purposes of research in modern botany.—ALBERT HOSKING.

(To be continued.)

## Renewal of Old Fruit Trees.\*

It frequently occurs that a halo of sentiment hangs around and envelops the old fruit trees of our gardens, dating, perhaps, from the days of youth, when it was a real pleasure to pick and eat a fruit (when the gardener was away), and to feel that by that unrighteous act one had added a mite to one's horticultural knowledge; for, as a member of the family, we felt we had rights in the fruits of the orchard and gardens which were not always recognised by the reigning chief. And as we grew up and came home—possibly to take the place of beloved parents—a certain fondness for the well-known old trees appealed to our minds, and we could not entirely yield to the gardener's suggestion that "them old trees wasn't no sort of use, and had better be made into faggots," and some fresh ones be purchased to put in their place. So it came to pass that, after a quiet talk, we assented to half measures and gave the old trees another trial, either by grafting some new varieties upon them, or by cutting away the old mossy and gnarled spurry boughs, and assisting them by a liberal stimulant at the roots.

Now, it is possible in many cases thus to renew aged trees; Pears are particularly amenable to treatment; Apples partly so. But worn-out Plums, Peaches, and, in fact, all stone fruits (except Cherries in orchards) are better destroyed at once, and replaced by new trees of the best varieties, using a liberal supply of fresh turfy loam to start them in. Under such treatment they will soon respond to the trouble bestowed on them and quickly fill up the vacancies.

Stone fruits will not endure that severe pruning which is necessary to renovation, being liable to "gum" on the strong shoots produced, or to "collar" at the junction of the new growth with the old stem, and thus blow out under the strain of heavy winds, or choke with gum and become useless. Cherries in orchards, however, never get beyond treatment, and to renovate them the trees should be gone over as soon as the crop is gathered, all the dead wood removed, and the boughs which are injured by breakage, or "splits" from contact with ladders, &c., at gathering time, or from the strain of an abnormal crop, be cut away. Then, if in pasture land, the long strands of grass, thistles, and weeds should be mown, and with the cuttings and prunings removed from the orchard and burnt. Sprinkle salt at 2 cwts. to the acre over the ground, and when a new growth of grass has set in turn in some ewe sheep and feed them with oil cake, chaff, Oats, Peas, or Barley once a day; move the feeding troughs every other day to fresh positions, until the new grass is fed down as close as a Turkey carpet, and continue this treatment through the winter, giving more or less food to the sheep, according to the weather, naturally most in cold times. The droppings of the sheep will gradually improve the grass sward, and cause the Cherry rootlets to rise in March to the surface for the nourishment to be found there. An earlier crop of foliage will thus ensue, which will protect the young fruit from those severe frosts which often occur in May, and even in June. The fruit will be nourished by every shower that falls, and after it is gathered new growth will be stimulated and a store of vigour imparted to the trees for the following year's crop.

On light soils the land in Cherry orchards may be again dressed with salt or kainit, and on heavier soils a dressing of 20 bushels of soot, or 5 cwts of basic slag, to the acre in February, will be of infinite value to the trees as well as to the grass. The same system will also renew or invigorate Plum, Apple, and Pear orchards, but the boughs should be very severely thinned, the useless spurs removed, and the centre of the heads of the trees kept clear and regulated.

In renewing old Pear trees trained on walls one system is to cut out every other lateral tier 6in from the main stem and start the shoots behind the cut to form new tiers. Afterwards, the remaining worn-out tiers can be served in the same way, and thus the tree will in time be entirely renewed with young wood. In cases where the variety is only second rate (as so many of the Pear trees are that were planted some fifty years back) the lateral shoots can be grafted 1ft from the main stem, and in two years' time will begin to give a small crop. Supposing a tree of eight tiers of branches, as many different varieties of recognised merit can be grafted in, or the tree may be used for the testing of new varieties, and in this manner a crop can be relied on in three or even two years, the root vigour of these old trees being

\* Paper read on January 28 1902, by GEORGE BUNYARD, V.M.H., at the meeting of the Royal Horticultural Society.

very powerful; if needed, some stimulant mulching lightly forked in may be used to assist the new growth. Another plan which I have seen successfully carried out is to remove all the branches and main stem down to the lowest tier, and by this radical operation the formation of strong new shoots will be stimulated from this lowest tier, which can be encouraged to grow in an upright form at such regular distances as are desired.

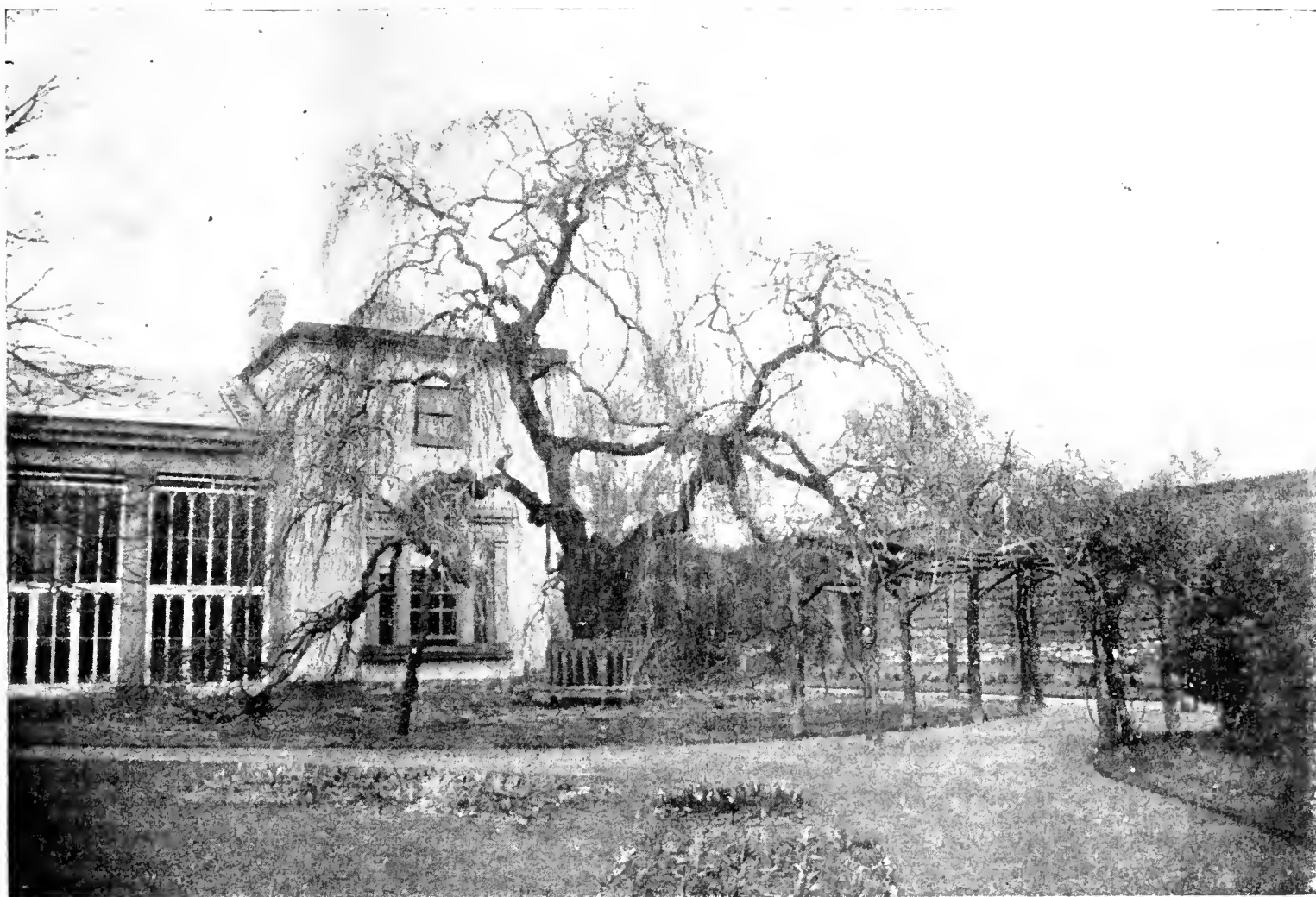
In this way a crop is readily secured the second year; and it is a very good plan for varieties which, like Jargonelle when old, often fruit on the ends of the branches only, and for other varieties which form a mass of fruitless spurs.

As regards overgrown pyramids and bushes, both of Pears and Apples in gardens, I should advise that all of poor or doubtful quality be at once dug up and destroyed; while those which are of good recognised varieties should be allowed to grow in a free and natural way, merely thinning out the superfluous inside shoots; they will thus soon produce freely on the branches of two or three years' growth.

In cases where Pears are on the Quince, stock and Apples on the Paradise, they are more easily dealt with, as the roots

## Insects as Garden Adornments.

Amongst the moths which assist in adorning our gardens are various species, large in size and strong-winged, of which we cannot often get a good view of, not even when they are hovering above flowers. Evening is their time of flight; they prefer the dusk, and on moonlight nights seem reluctant to show themselves. Still, they are conspicuous as seen on the wing, and might be taken for bats. Sometimes their eyes shine out like little stars. Is this luminosity phosphorescent or electric, I wonder. Some make a hum when they fly, others a sort of rustling sound. There are times, though, while they happen to rest on a tree trunk or paling during the day, that afford us a good look at the upper wings at least. The big hawk moths are sluggish then; you may even give one a push and it will not budge, but strikes with the front pair of legs, as if it would say, "Leave me alone." Out for a morning walk in summer, I



A Weeping Ash at Nostell Priory. (See page 398.)

are closer to the stem; and if a trench be made round each tree, the coarse roots removed, and the trench filled with fresh soil, the new rootlets formed will be so abundant that the tree can readily be lifted and removed the following October, and be either placed in a new position, according to size and vigour, or be regulated in their former positions and refreshed with new soil to work in. We prefer, however, to make an entirely new plantation with the old trees elsewhere, and to substitute (after a year's fallow or inter-crop) a fresh lot of trees altogether to fill up the ground thus left empty. This gives a chance of renewing the old stale soil, and also of introducing new or desired varieties.

Where, however, the garden is limited, only half of the old trees should be operated on in one season in order to lessen the chance of an entire failure in the supply; but the old removed trees will after a season's growth more than reward the operator for any trouble he has taken with them.

So far as cordons on walls are concerned, we should prefer to replant entirely, remaking the borders at the same time, as new trees can be purchased in a forward state at a cheap rate, as severe measures frequently prove unsuccessful.

(To be concluded.)

spied on a fence, in repose, a fine lime-hawk moth. By a little coaxing I got him to crawl upon my hand and carried him along half a mile, then moved him to another fence.

Our largest British moth, having the formidable name of the Death's-head (*Acherontia atropos*) is an insect of singular ways, and one of its peculiarities is, that though July is the usual time for emergence, specimens sometimes appear in October or even November. There are few flowers for them then about the garden. Perhaps they visit the Ivy bloom. An eccentric one has been caught sipping from a treacle cask at a grocer's. More than the nectar of flowers does this moth love honey stored by bees, hence its visits to the old-style straw hives still existent in some gardens. Can the stings of bees penetrate its elastic covering of cuticle? We think not, yet a bee might find out some weak place in the moth's armour. Anyhow, this insect has been discovered dead in a hive. It may enter but not manage to turn round and escape, especially if gorged with honey. The notion that its peculiar cry alarmed the bees does not seem to have sufficient proof. I doubt bees being affected by this, but it has terrified superstitious humanity. The moth is handsome, its rich brown wings are curiously mottled and



banded, its thorax having the markings compared to a skull and cross-bones.

Its caterpillar is handsome, too, but in a different style. Like the moth it is averse to daylight display, and mostly feeds at night. The general colour is yellow or light brown, sprinkled with black points, and on the sides are seven bluish stripes, having a white edge, and the back bears a rough horn, which is recurved. Potato fields yield the greater number of these caterpillars, which are scarce in some years, and seldom occur plentifully enough to do serious damage, but when large they devour many leaves. The tubers of the plant are not interfered with. Specimens have been found feeding on the garden Jessamine, and more than once on the Tea-tree (*Lycium barbarum*). A few said to have come from a Privet hedge, were probably feeding upon the climbing Bittersweet or Woody Nightshade which grows along some hedges, even in London suburbs. Evidently, before the Potato arrived, the species fed on some of our native Solanums. Occasionally these caterpillars are about 4in long, and they have, like the moth, a power of producing a sound, but sometimes there are silent specimens. This sound is rather, Newman says, like the snap of an electric spark.

Approaching the Death's-head moth in size is the *Convolvulus* or unicorn hawk, less showy, for its wings are grey, but the body has brighter bands of colour. This is an erratic species, causing much speculation to entomologists; one year the moths appear all over the country, then for several years it is exceedingly scarce. This is a late species, being on the wing at the end of August and in September. It is furnished with a long spiral tongue, so poises itself high over a flower. It has often been taking sipping nectar from the *Petunia*, or the sweet scented Tobacco. Occasionally a moth has entered a house, attracted perhaps by a light, its presence sometimes alarming people. The food of the caterpillar is either a wild *Convolvulus* or a garden species. It is seldom discovered, since it carefully conceals itself during the day. Herein it differs from its relative the Privet hawk (*Sphinx Ligustri*) that caterpillar is conspicuous upon the hedges in the morning and towards evening, but it usually retires to the middle of the bushes while the sun is hot. It is well known by its violet and white stripes upon a ground colour of pale green, feeding on Privet or Lilac in August and September. Generally, the moth emerges at midsummer, or shortly after.

Most gardeners make acquaintance with one or other of the species of *Smerinthus*. I have had the Poplar hawk, *S. populi*, shown me most frequently, taken reposing upon a wall or in a conservatory. With twilight it is on the wing, like its brethren, but is not particularly rapid. Various Poplars furnish food to the caterpillar, which is rough, yellowish green, and striped. It is reported to have been taken upon the *Laurustinus*. A fine, though not a showy moth, it is surpassed by the eyed hawk (*S. ocellatus*), which has the brown upper wings tinged with red, and beautiful eye-like spots on the lower wings. This is a moth of May and June; the caterpillar feeds later on, its usual home being a Willow or Poplar, but I have taken it off Apple trees in Gravesend and East Ham. It is rather like the preceding, but paler, and distinguished by its horn, which is blue, not yellow. The lime hawk (*S. Tilia*) is remarkable for pretty shades of grey, brown, and olive green on its wings. My first introduction to the caterpillar was at Norwood, Surrey, many years ago, where a gardener, noticing that a row of Limes were somewhat thinned of leaves, went up a ladder and brought down several of these caterpillars. They have a curious shield or plate behind the horn. Frequently these caterpillars occur on the Elm, and get blown down by the autumn winds.

A lady sent me one day, with a note expressive of surprise, caterpillars of the elephant hawk, which she had taken in her vineyard. It is not a usual foe of the Grape, for this species, *Chærocampus Elpenor*, is generally taken, as caterpillar, on the Great Willow Herb, or some Bedstraw, but it has a varying appetite, and will also eat garden Fuchsias. Here the caterpillar has given name to the moth, for it is tapering, and so has been compared to an elephant's trunk. Its colour is brown or yellowish, having two black spots on each side. The moth is of good size, rather slimmer than the preceding species, of dark green with pink lines and spots, and it flies early in the summer. Then there is a small elephant moth (*C. porcellus*) which sometimes

comes to June flowers of an evening. Its caterpillar has no horn, and feeds on Bedstraws.

We must not forget the humming bird hawk (*Macroglossa stellatarum*) a remarkable species, if not brilliantly tinted. It has black and white tufts of hair along the body, which open out when it flies. "What is this," writes a poetic naturalist, "at our Jessamine with bird-like head with brilliant eye, with outspread and parti-coloured tail, humming loudly, and though driven away, returning again, day after day? It is the humming bird moth." From January to December we have some flower welcome to her, and she is most welcome to us." Certainly, it is a bold insect, but it would not bear too much driving away; nor can we expect to see it all the year round, though specimens have turned up in wintry months on a sunny day, for it is not a night species. I have seen one careering high about a drawing-room, having entered through a window in which were flowers. The caterpillar is brown or green and eats Bedstraws during the summer.—ENTOMOLOGIST.

## Seeds.

Mr. James Percival, M.A., Lecturer on Botany at the South-Eastern Agricultural College, gave an interesting and most instructive lecture at the Gravesend Municipal Technical School recently on "Seeds; their Structure, Germination, and Quality."

Taking the Broad Bean seed as a type of all seeds, he explained the structure of the Bean, drawing attention first to the mark on the edge of the seed which indicates the point where it was attached to the pod which the parent plant bore. This attachment was the means by which the seed received the necessary nourishment for its growth and support. When the seed became developed and finally ripened, the attachment dried up, and the seed remained loose in the pod. The mark, however, remained, and a similar mark was found on all seeds. Close to this point there was also a small hole, easily visible in the Bean, but not so readily seen in all seeds, though it is present even in such small seeds as *Begonias*. The object of this small hole was to admit the absorption of moisture into the seed, so as to enable the nutritive matter stored up therein to swell and become dissolved, causing growth to push. There are three great essentials in germination, all of which must be present, or seeds cannot grow. These are a suitable temperature, adequate moisture, and fresh air. Germination cannot be carried on without these. When a Bean seed germinates it may be seen to split in halves, and a small structure pushes out. This immediately commences to grow in two different ways. The radicle or root end pushes towards the soil. Should the seed be turned round away from the soil this little root end will try to find the soil again and turn downwards. Nothing can make it grow any other way. The opposite end, of course, seeks the light, and grows upwards. It cannot be made to grow in any other direction.

The two divisions of a Bean seed consist of a food supply for the young plant until it can gather for itself. They are covered with a coat or testa, which is easily removable, and simply acts as a protective covering. All seeds, though of different shape and size, are similarly constructed. Different seeds require different temperatures to germinate. None will germinate where the temperature is too high or too low. The best temperature for the germination of all seeds has to be ascertained. The majority germinate between 50deg and 80deg.

Seeds germinate the most quickly when sown immediately after becoming ripe. They then contain more moisture, and usually make a more vigorous growth than seeds that are kept longer. The longer seeds are kept, the weaker they become in germinating power. It is a fallacy to suppose that seeds obtained from mummy cases thousands of years old can grow. Few, if any, seeds can be depended upon after ten or twelve years. Stock seeds will, if sown soon after being ripe, produce a large percentage of single-flowered plants, while if the seed is kept a few years a weaker plant is produced and double flowers. The tendency is for seeds to become weaker in vegetative powers. Hence Melon seeds are preferred by gardeners to be two or three years old before sowing. Melons are required to be fruitful rather than of vigorous growth. The deterioration of the seed by age produces a weaker and a stockier growth and promotes a fruitful condition.—E. D. S.



### Rose, Golden Queen.

In an article on "Roses with Yellow Flowers," in a recent issue of "Le Moniteur d'Horticulture," a writer describes Messrs. Wm. Paul and Son's new Golden Queen, which we figured in our issue of July 11, 1901. It is stated to be "A hybrid of the Noisette section, an offspring of the variety Rêve d'Or. It is a vigorous Rose which develops a profusion of yellow flowers, of a darker shade than those of the mother parent Rêve d'Or. To ensure an abundant flowering, it is necessary during the springtime, to subdue the tall or elongated shoots, by pegging them down horizontally with the soil. The general culture otherwise, of this Noisette Rose follows that accorded to Rêve d'Or or Allister Stella Grey." We should add that Golden Queen is useful as a bedding variety, and might well be tried.

### Some New Roses of 1902.

If anything will increase the already great popularity of our national flower it is the beautiful blossoms that are still to be seen in many parts of the kingdom at this late part of the season. At a time when we are usually making preparations towards spring, we have still with us many beautiful flowers that in former years have ceased blooming before this. To my mind there is nothing more beautiful than late autumn Roses, and it is pleasing to see that most new Roses introduced now-a-days are generally noted for their wealth of bloom and late-flowering propensities. In preparing their lists for the coming planting season many readers will wish to include in their selections some new ones, so a description of a few of this year's introductions will not be out of place. Placed alphabetically we have:

**Aimée Cochet (H.T.).**—A flesh-coloured Rose, with rosy-peach centre; very large, full, well formed blooms, magnificent in bud, and a vigorous grower.

**Alice Lindsell (H.T.).**—This is a most distinct and magnificent Rose; creamy white, with pink centre. The blooms are large and perfectly formed, the petals smooth, circular, and of great substance. The growth is very robust and of branching habit, flowering with great freedom throughout the season. This N.R.S. Gold Medal Rose is certain to rank among the most select kinds for all purposes.

**Ards Pillar (H.T.).**—Too much cannot be said in praise of this lovely variety. In it we have the perfection of a pillar Rose of vigorous growth, with large, most distinct and attractive foliage; the blooms, rich velvety crimson, are produced with great freedom.

**Ben Cant (H.P.).**—Remarkably strong and sturdy in growth, with fine leathery foliage; every shoot produces blooms, and it is thoroughly perpetual. The flower, which is large, bold, and sweetly scented, is deep clear crimson in colour, with slightly darker flushes in the centre, and dark veining throughout. Awarded Gold Medal N.R.S.

**Dorothy Perkins (H.W.).**—A vigorous grower, flowering in large clusters; colour soft light pink, very fragrant and lasting.

**Edith D'Ombraïn (H.T.).**—A most distinct and superior Rose, the habit of growth being erect and very robust, with deep green foliage, every shoot bearing a flower. The blooms are large, full, and imbricated; white in colour, with an occasional pale pink tinge.

**Hélène Guillot (H.T.).**—A variety bearing large, full, Camellia-shaped flowers, varying in colour from pure white to salmon-white, tinted carmine, centre orange-yellow.

**John Ruskin (H.T.).**—This magnificent Rose is most distinct among a deservedly popular class. A vigorous grower with large, attractive foliage, bearing the entire season full splendidly formed blooms of an exceedingly rich tint of bright rosy-carmine, deliciously perfumed.

**Lady Roberts (T.).**—A lovely coloured Rose, described by the raisers as a rich, reddish apricot, the base of the petals being a metallic coppery-red, edge of petals sometimes shaded pale orange. A variety of strong growth and very free-flowering. Awarded the N.R.S. Gold Medal.

**Longworth Beauty (T.).**—A good exhibition and a good garden Rose. Colour, apricot-yellow, edge of petals distinctly margined pink. Strong healthy grower, sweetly scented, and perfectly hardy.

**Tea Rambler (P.).**—A seedling from Crimson Rambler and a Tea. Growth vigorous, producing very freely bunches of small, well-formed flowers. Colour, coppery-pink, with a salmon flush; very distinct.

Most of these belong to the Hybrid Tea class, which promises to be the class of the future. One cannot wonder at this, for they have no equal in foliage and flower, being early in bloom and lasting a long time.—J. W. J., Oswestry.

## Gadding and Gathering.

"HERE AWA', THERE AWA'."

### Shrubs at Coombe Wood.

Messrs. J. Veitch and Sons, Limited, have an extensive tree and shrub nursery at Coombe Wood, on Kingston Hill, in the county of Surrey. A visit there at this, or any other season, is time well spent, provided the weather is favourable for an inspection of the great variety of stock. It is safe to say that one has only to ask for any hardy tree or shrub, including also the "Bamboo" tribe, climbers, plants for covering buildings, hedges, the banks of streams, and choice new representatives not to be found elsewhere, and the same can be supplied. The few brief notes herewith are mainly devoted to the new shrubs which have been introduced to Coombe Wood during recent years, and there tested. It may be remembered that Mr. James H. Veitch delivered a lecture on new Japanese trees and shrubs before the Fellows of the Royal Horticultural Society on September 23. This lecture was illustrated by cut specimen branches of many new subjects, and also by photographs of the actual trees as they are at Coombe Wood. The lecture will be printed in full in the Society's Journal.

On a back page this week there is an illustration of the new *Vitis Thunbergii*, the largest leaved member of the genus, even excelling *V. Coignetiae* in this character. It is an exceedingly vigorous climber, decidedly handsome, and perfectly hardy. The autumn aspect of the foliage is indeed charming, with effective hues of scarlet and crimson. It is reputed to be a strong and free grower when well established, and speedily attains imposing dimensions. The specimens at the nursery bore out this testimony.

Another very beautiful climbing plant which is becoming known is *Polygonum Baldschuanicum*, which was found some years ago on the mountains of Turkestan, and subsequently introduced into European gardens through the Imperial Botanic Gardens at St. Petersburg. An Award of Merit was accorded to it by the R.H.S. about two years ago. The stem-growth is almost like that of the Hop, or, better still, the Honeysuckle, the leaves being larger than those of the latter, and towards midsummer, or earlier, the whole plant becomes wreathed with pendant pink floral clusters, lovely to look upon from a distance. For covering mounds made of tree roots, or for pillars, pergolas, and buildings, nothing better could be recommended. It furnished a gallant show on a pergola in the Jardin des Plantes last summer, and at Kew and Messrs. Barr's nursery at Long Ditton this climbing *Polygonum* may be seen in excellent condition.

In case these notes are curtailed to meet the editorial arrangements, I must include a notice of the beautiful North American *Rubus deliciosus*, of which a figure appears on page 400. This is one of the flowering shrubs which win regard because of their simplicity of form and purity of whiteness. The picture will convey a far better impression of this Bramble than a description could, and a position by a wall is just such as suits it. Everything that is noteworthy, of course, can be seen at Kew, and on the sandy soil there this white-flowered *Rubus* flourishes; a bed may be seen on the west side of the Ferneries. Messrs. Veitch find it a free grower and floriferous at Coombe Wood, and from them the illustration comes.

With all the freedom of a sampler of wares, one may turn sharply aside to name a Bamboo, whose merits are such as ought to ensure a place for it in every garden in the land. Groups of *Bambusa palmata* (of gardens) by the water's brink enhance the scene, and while the plant is comparatively hardy, it effectively furnishes what use allows one to describe as a sub-tropical character to the surroundings. The illustration on another page from Messrs. Veitch depicts one well grown plant. The stems are flattened at the top, reaching 5ft high. The vivid green leaves are 12in to 13in long, by 3in to 3½in broad, tapering rather suddenly to a very fine point. No other Bamboo has larger leaves. Its creeping rhizomes are very active, and the plant should therefore be grown apart from other species. This also bears the name *Arundinaria japonica*.

### The Birch Trees.

The best weeping Birches, like *Betula alba pendula* and the variety of this named *Youngi*, furnish part of the most useful material an ornamental planter has at his disposal. No tree is so graceful, so fragile to appearance (yet so hardy), nor associates better with any form of tree or surrounding features. Undoubtedly their exquisite charm of feature is heightened when they are seen depending from a bank over a smooth sheet of water, or clothing the steep slopes by the sides of mountain torrents, as in parts of the Scottish Highlands; but whether planted thus, or in colonies alone, albeit they mix well in wooded belts, their presence is unexcelled, and for decorative use they are invaluable. A number of distinctive species and varieties exist,



and though all of them are probably not in commerce, most of them are procurable.

*Betula alba* is the Silver, White, or Common Birch, and has a very large number of well-marked varieties. It is one of our native British trees, and besides being renowned for its beauty, it is also invaluable as a forest tree. *B. a. pendula* is largely used in ornamental planting, and Young's variety of it is even more graceful still, having longer branchlets and thick masses of dark, lacinated foliage. *B. alba pyramidalis* has white barked trunk and erect growing branches of a dark brown bark. The leaves are larger than those of the type and produced thickly in clusters. It is a distinctive and ornamental tree. *B. a. latifolia*, from what I have seen of it, is not robust, and makes twiggy wood.

*B. nigra*, the Black or River Birch, is rather stiff in habit, though the shoots are dependent. *B. lutea* has dark brown stems. The leaves of this species fall early. *B. lenta*, or Cherry Birch, is probably so called from the resemblance of the wood and bark to that of a Cherry tree. The leaves are 5in long and 2½in broad, and ribbed like those of an Alder. It is a vigorous grower, and furnishes a handsome tree.

*Betula ulmifolia* has greyish-white bark, but is not a very effective tree unless when a thoroughly good specimen is seen. The specific name denotes that the leaves are like those of an Elm. Undoubtedly one of the finest trees of the genus is the renowned Paper Birch—*B. papyrifera*. The foliage is of medium size, and not unlike that of *B. ulmifolia*. The habit is free and open, and the bark is silvery. Another of the large-leaved Birches is *B. Ermani*, a distinctly ornamental tree of robust character, and grows densely for a Birch. It is Japanese. The shoots are buff, or brownish. *B. occidentalis* possesses dark stems and medium-sized leaves.

The Nettle-leaved variety of the Common Birch is a beautiful tree, a native of Sweden, and quite hardy. The leaves are almost exactly like those of the Stinging Nettle, but are smaller than a typical Nettle leaf. The foliage is borne in drooping clusters, the growths being twiggy. The bark is white, and altogether this is a very beautiful tree for ornamental plantations or grounds.

In *Betula Maximowiczii* we have one of the best three Birches in cultivation. It is very handsome and distinct, and attains a height of 80ft to 90ft, with a trunk 2ft to 3ft in diameter, covered with a beautiful grey and orange bark. The dark green leaves are from 4in to 6in long, and almost as broad. The form of the tree is pyramidal, and the habit open. It is a Japanese native.

*B. populifolia* is a pretty and graceful tree, the leaves resembling those of *B. nigra*, but smaller. Lastly, there is *B. humilis*, a dwarf little bush, native of the colder parts of the northern hemisphere, and may be compared to a bushy Cotoneaster or to *Berberis Darwini*. Others that might be noted would not be so meritorious from the point of view of ornamental character.—  
WANDERING WILLIE.

### DAPHNE BLAGAYANA.

The fragrant Daphnes are always prized in the best gardens where they have once found a footing, and none are, I am certain, more thought of than *D. Blagayana*, one of the most pleasing of all, with its fine white flowers, which exhale such a delicious perfume. It lasts so long in flower that it is worth a considerable effort to secure the best results for such a charming plant for the rock garden, the flower border, or the edge of the select shrubbery. While all who have it desire this, it is also evident that all are not successful in securing such results as they strive for. This is due to ignorance of this Daphne's requirements, which are simple and are easily supplied, although they must not be neglected, or the usual result, disappointment, will follow. One must say, however, that some of the directions given for its cultivation are needlessly minute. Thus, if its other requirements are attended to, it does not mind about having full sun, although a half-shaded position may be preferable. Nor does it so much mind not having its standard compost of equal parts of peat, leaf mould, and sand, for I have known it do well in common loam, or in an even stiffer soil. Its main requirement is that its shoots, or young growths, should be bent down and kept to the soil, either by pegging or by placing stones over all but the ends of the shoots, top-dressing them at the same time, and only leaving a couple of inches or so exposed. This ought to be done in autumn, August or the beginning of September being a good time at which to perform this essential operation. It is mainly in this that success lies. No one who has seen plants so treated for a number of years and has compared them with those grown in the ordinary way will be inclined to allow their plants to be cultivated in any other fashion. This eastern European species of Daphne is one of the choicest of our dwarf shrubs, and a bed or mass of it from 4ft to 5ft across is a most pleasing object when grown on the system recommended. In a few years a plant so treated will cover this space.—S. ARNOTT.



### THE EARLSWOOD COLLECTION.

If half a dozen of the Chrysanthemum experts of Great Britain were to be named, Mr. William Wells, chief of Wells and Co., Limited, Earlswood, Surrey, would be included, and his name would still be to the fore if only three were chosen. This is his semi-jubilee year as a commercial Chrysanthemum cultivator. His introduction to the flower of his choice was singular in the light of present achievements. Mr. Wells was a private gardener prior to 1877 at Fen Place, Sussex. His employer had also a garden at Clapham Common, and it was the success of the gardener at this town residence as a Chrysanthemum grower that first fired our friend Mr. Wells to surpass the efforts of his prize-winning rival. From Clapham he secured some cuttings and gave them his attention. He was scarcely up-sides with Smith, the Clapham gardener, the first year, but by the end of the succeeding autumn, some of the blooms from the Sussex plants were so large and handsome that Mr. Oxley, the employer, and who greatly loved Chrysanthemums, remarked, "Why, William, your flowers beat Smith's." Shortly after that period, Mr. Wells commenced for himself as a specialist at Earlswood, where he has since been, and has successfully worked up a large and ever-increasing business. His motto is: "One customer well served is equal to ten advertisements."

### MR. WELLS' SEMI-JUBILEE.

About twenty-five years ago Chrysanthemums could scarcely be obtained at Christmas, and Mr. Wells' earliest assistance after starting in business for himself was derived from the sale, at 3s. per dozen blooms, of the white Miss Marcheau and the better known Elaine, both of which he was fortunate enough to have a fair supply of for the Christmas season. Cuttings of these he advertised through the medium of the *Journal of Horticulture*, and sold many. Calvat's novelties he acquired and also distributed, and step by step the fame of the Chrysanthemum advanced, and this trade grower with it.

Some years ago he and Mr. T. W. Pockett, curator of the Melbourne Botanic Garden, in Victoria, agreed to work in harmony; the latter as a raiser of new varieties in the dry, airy climate of the Island Continent, and Mr. Wells to be the distributor in England. Few of the many cuttings sent from Australia to Surrey fail.

### THE CHOICEST FLOWERS.

And now, touching the Earlswood flowers this year, I will name some of the gems of the collection. Mrs. T. W. Pockett stands in the forefront; Mrs. Alexander McKinley was irreproachable; Donald McLeod was a perfect model of a beautiful flower; Madame Herrewage was excellent, spotless in whiteness, though a trifle loose; W. R. Church, of enormous size, substance, and grand finish; Chas. Longley, undoubtedly one of the finest blooms of the day; Lord Ludlow, a fit match for Donald McLeod; Sensation, beyond words in the richness of its golden blaze and russet shading; T. Humphries, a bright and lovely flower; Lord Alverstone, a noble bloom of great size, strength, and richness of colour; and charming snowy masses in floral form representing that queen of whites, Miss Alice Byron. These eleven I have named from memory, because they so well and favourably impressed themselves at my visit on the 23rd inst.

### S. T. WRIGHT (NEW).

One I have not included, and for the reason that it ought to be named apart. It is a novelty, and bears the patronymic of the superintendent of the Royal Horticultural Society's Gardens at Chiswick—S. T. Wright. This is the Wellsian "big-gun" of the year, and no doubt hundreds of Journal readers will have an opportunity of viewing it this year. It is a massive Japanese, having stout broad petals coloured on the upper surface a rich claret-crimson shade,

with golden bronze reverse. I think the best guarantee of the worth of the new S. T. Wright lies in the fact of so notable a name having been given; and Mr. Wright may well be proud of this flower named in his honour. It is a seedling of Mr. Pockett's; it does well on first crown buds, but better on second crowns. The height is 6ft., stems and leaves vigorous, and all the buds are good.

#### CHELTONI—A YELLOW NELLIE POCKETT.

Another newcomer which Mr. Wells is immensely delighted with is Cheltoni, the entire stock having been secured by him from various parts of the country. It is a yellow sport from the delightful white-flowered Nellie Pockett, and as such it is sure to be readily welcomed. Mr. Wells has a large stock of it, part of which he received from a Mr. Lustv. of Cheltenham, who secured a certificate for it at Cheltenham. Another part of the stock was from Huddersfield, and yet another portion from Whitchurch in Shropshire. The colour is very much like that of Phœbus.

Mrs. T. W. Pockett is very liberally cultivated both in pots under glass and planted out in the open, being protected overhead by an awning. In all cases it does grandly. It is a real amateur's flower; that means it is an easy doer.

Lord Ludlow, already referred to, produces huge flowers in pots 7in and 8in in diameter. It has come grandly on first crown buds this year. O. V. Douglas furnishes an immense head of the "butter and eggs" colour mixture, and is a worthy variety.

#### FRAGRANT CHRYSANTHEMUMS.

Sweet Violet is a new purple. Few Chrysanthemums are really fragrant, but Prown may be named, also Albini, and Mrs. E. W. Clark, each being late purples, curiously enough. This makes four scented Chrysanthemums.

I can scarcely fail to mention the handsome bronzy-gold Harrison Dick, seeing that it bears my own name. This will be another of the chief of the Wellsian novelties for 1903. It is in very many respects like Matthew Smith, but more intensely coloured, and is a good doer. The stock is very limited.

Mrs. Harry Emmerton is a large yellow Jap., and easy to do, like so many others of the Australian yellows. Marica takes after Mrs. White Popham type; Madame Waldeck-Rosseau (Calvat's) is crimson-amaranth, with bronze reverse; good. Bluebeard, new last year, is so called because of the blue apparent in it along with the purple maroon.

#### OTHER NOVELTIES.

Lord Alverstone is a very handsome flower, with broad, deep crimson coloured florets, and of a dwarf habit of growth. Donald McLeod does well when treated the same as Mrs. Weeks, striking in February and taking the first bud that comes. Edith Salter, a new Japanese of merit, having lengthy petals of a soft purplish-lilac shade. Ben Wells, named after Mr. Wells' grandson, is a giant among its fellows, and is largely grown. The buds are opening well. All Mr. Godfrey's novelties are A1 at Earlswood, being firm, rich, and large.

Mr. F. S. Vallis is a monster for size, and of a pale yellow shade. It was regarded by Mr. Calvat, the raiser, as one of his best. Ethel Fitzroy, too, proves to be in the forefront, and is one of Mr. Weekes' finest Japanese incurveds. Madame L. Cheveant (Calvat) is one of those pleasing flowers which bear a second glance. It is reflexed, with moderately broad petals, silvery tipped, rosy-lilac or Peach-blossom tint, with a dash of mauve. It is exceedingly sweet.

There are many others one might describe or refer to, did space allow of it. Violet Lady Beaumont is one; Hon. Mrs. Tennant is another, also Lord Salisbury, R. Hooper Pearson, C. J. Salter, Calvat's Sun, Duchess of Sutherland, La Fuson, and Claremont, all of which are showing up well. The past season has been favourable for those Chrysanthemums which usually carry heavy and close-built flowers; they have, and are, opening nicely.—VIATOR.

#### Longford Castle.

The many friends of that very excellent man and able gardener, Mr. Hazleton, who has worked so hard to make Longford a credit to himself and its owner, will regret to hear of his leaving there shortly. We trust that our friend may soon be comfortably reinstated in a garden worthy of his merits and care.

## Societies.

### R.H.S., Scientific Committee, Oct. 21st.

Present: Dr. M. T. Masters (in the chair); Messrs. Massee, Saunders, Bowles, Worsley, Holmes, Druery, Hooper, Douglas, Gordon, Shea, and Paul, Drs. Cooke and Rendle, Revs. W. Wilks and G. Henslow, Hon. Sec.

*Roses*.—Mr. Wilks exhibited specimens he had received from the Herbarium of M. L. de Vilmorin of *Rosa sericea*, with long decurrent thorns; of *R. aculeata*, with very large thorns; and illustrations and photos of *R. macrophylla*, a large crimson-flowered species.

*Begonia, crested*.—Sir Trevor Lawrence sent several flowers showing different degrees of creasing of the petals. In some the entire petal was reduced to a midrib covered with projections.

*Leaf-miner*.—Mr. Holmes showed specimens of a Leaf-miner on Hogweed, which Mr. Saunders undertook to examine; also a specimen of *Parnassia* attacked by fungus.

*Cankerous growth*.—Mr. Hooper showed some fruit tree branches with a cankerous growth, and Daffodil bulbs attacked by the dipterous fly, *Merodon*.

*Auricula aphid*.—Mr. Douglas brought plants of *Auricula*, the roots of which were infested with an aphid, but the plants themselves were perfectly healthy. They appeared to be *Frama Auriculæ*, and had been observed twenty-five years ago.

*Vigour in hybrids*.—Mr. Douglas called attention to a plant of a hybrid between *Cattleya Doweana* and *C. velutina*; the first parent has usually three to five flowers, and the latter three only; but the hybrid bore nine. The specimen illustrated the usual result of increased vigour in hybrid plants, sometimes at the expense of fertility. It was observed that *Fairreanum* hybrids will not cross. Mr. Paul remarked that extraordinary growth occurred in hybrid *Crimson Rambler* Roses, long shoots 16ft in length occurring in one season, but accompanied with some decrease in the production of flowers.

*Carnation leaves rooting*.—Mr. Douglas brought leaves of a tree *Carnation*, one branch of which bore leaves with minute roots, arising from the pericardial region of the fibro-vascular bundles, and issuing from beneath the epidermis all along the midrib. Mr. Massee observed that it was not infrequent when eelworms were at the roots, the roots then often appear from the stem as well as the leaves.

*Exhibition of fungi*.—He also suggested that it would be advisable to hold an exhibition of fungi, displaying the edible and poisonous species in separate collections, to be collected by the members of the committee or other persons interested in them. Mr. Wilks proposed October 13, 1903, for the first exhibition.

*Cactus blistered*.—Mr. Shea showed seedling plants with blistered patches. Mr. Wortley observed that he was familiar with the occurrence for many years on old plants, but this appeared to be the first instance on young plants. He had noticed flies on it, and thought that possibly they might have been the initial cause of the mischief, the fungus following.

*Peach mildewed*.—Mr. E. Salmon sent a history of a Peach raised from a stone, first in a pot, then in an unsuitable environment, and finally in his garden, nine years ago. It bore the Peaches, which, being rather damp, were placed by the fire. "They have gone back ever since, and the skin will not peel." The one sent was attacked by the ordinary Peach mould.

*Lime trees and undergrowth*.—Dr. Voelcker inquired if there was any truth in the belief that nothing will grow under Lime trees. It was not generally accepted by the committee; but a Swede (a gardener) said that it was the common belief in Sweden that such was the case.

*Pine-bark and Coccus*.—Mr. Saunders reports as follows on specimen sent to the last meeting: "As far as I could see it was a different species to that which infests Beeches; but as I was not quite sure I sent specimens to Mr. Newstead, who replies as follows: 'I think the insect you sent to me on Fir bark is the Pine aphid (*Chermes pini*), but I could not, unfortunately, extract an insect from the white sacs. Could you send me a further and plentiful supply in order that I may make quite sure of the insect.' It is pretty certain that Mr. Newstead thinks it is a different species to that on the Beech, for he suggests that it is a *Chermes*, whereas the other species is a *Pseudococcus*."

*Ipomœa rubro-cœrulea*.—Mr. Worsley showed a blossom of this plant, observing that it has been described as being at first red, then blue, but in his experience this order was reversed, as it opens a deep blue and then becomes of a crimson tint.

*Arctotis sp.*—He also showed specimens of *A. arborescens* (white), Jacq. and *A. Leichlini* (yellow). The first named species was the first to be introduced from South Africa. The latter is called the South African Daisy, as it has white ray florets touched outside with crimson.

*Embryo buds on Tulip Tree*.—Dr. Masters showed examples of these, which are common on Beeches, Cedars, and Deodars, but not seen before on Tulip Trees.

*Gladiolus*.—Mr. Jenkins, Hampton Hill, sent a very long spike of a crimson variety. The height was 3ft 8in. It was the result of a corm which had been neglected from October, 1900, to June, 1902, when it was planted.



*Passiflora n. sp.*.—Dr. Masters showed a specimen which had been accidentally introduced with a *Cattleya Mossiae*. It had not yet been described or named.

*Horticultural Society of Picardy.*—Dr. Masters then gave a brief account of his visit to the gardens and building of this society at Amiens. A complete description will be found in the "Gardeners' Chronicle" of September 11, 1902, page 267.

*Burst, n. sp., introduced.*—Mr. Massee described the introduction into England of a new species of this fungus as follows: "Twelve years ago one of the cereal burst fungi was sent from Patagonia and Bahia Blanca, where it was stated to be very abundant. The host plants were *Bromus unioloides*, H.B.K., and *Festuca bromoides*, L. As usual, the fungus formed a black mass in the ovary of the host plant, and proved to be a new species—*Cintractia Patagonica*, Cke. and Mass. Quite recently a traveller in these regions observed that *Bromus unioloides* was extensively grown, mixed with Lucerne for fodder.

"Seed of the *Bromus* was brought home and sown in Lincolnshire, and on producing fruit was observed to be attacked by the *Cintractia*. The above illustrates one of the methods by which injurious fungi are introduced from one country to another, and unless great care be taken to stamp out the newcomer, it is just possible that we may eventually have to add another cereal fungus pest to our already large list."

### National Chrysanthemum.

A goodly number of novelties were staged at the meeting of the Floral Committee of the above society at the Royal Aquarium, on the 27th inst. The season being a late one, it is yet early for novelties to be seen in their fully developed form, and of those staged on this occasion a longer time on the plants would have added to their qualities. It is anticipated that on the occasion of the meeting of the Floral Committee on November 10 a considerable number of new varieties will put in appearance; it is, therefore, needful that the Floral Committee set up a high standard in granting certificates to novelties. Something more is now needed as an ideal than a flower which commanded a First Class Certificate of Merit two and three years ago. There is just the danger that the commercial value of an award of this character may dominate the minds of some members of the committee and lead to the honouring of varieties of uncertain value.

First Class Certificates of Merit were awarded to

*Japanese Miss Mildred Ware.*—A flower of the Madame Carnot build, said to be a seedling from a cross between *Pride of Madford* and *Madame Carnot*, in colour pinkish salmon; a kind of deep coloured *Charles Davis*, and it might be said to be intermediate in colour between *Charles Davis* and *Lady Hanham*. From Mr. T. Bullimore, The Gardens, Canons Park, Edgware.

*Japanese Miss Olive Miller.*—Silvery pink reverse, which incurving and curling towards the centre nearly hides the pale purplish surface to the long and fairly broad florets; full, deep, and very pleasing in colour. From Mr. G. Mileham, The Gardens, Emlyn House, Leatherhead, Surrey.

*Japanese George Penford.*—A glorified Edwin Molyneux type; rich crimson with an old-gold reverse; a type of flower greatly needed on exhibition stands; should this variety maintain its character, it will be a real acquisition to the exhibition stand. From Mr. Charles Penford, The Gardens, Leigh Park, Havant, Hants.

*Japanese Florence Penford.*—Yellow, with a delicate amber reverse to the broad, long, curling florets; a pleasing variety of excellent character. From Mr. C. Penford.

*Incurved Cecil Cutts.*—A large, full, bright yellow incurved raised by Mr. H. Weeks, Thrumpton Hall Gardens, Derby. Deep in colour, good petal and form, and said by Mr. William Higgs, who is growing it this season, to be quite distinct. From Mr. Thomas Mudd, Thorneywood, Nottingham.

*Rycroft Beauty.*—A very free blooming early variety of a pleasing shade of pinkish rose. Commended as a market variety. From Mr. H. J. Jones, Rycroft Nursery, Lewisham.

*Gladys Gray.*—A soft yellow sport from the bronzy *Edouard Lefort*, bearing this name. Promises to make a very useful variety for cutting from. A vote of thanks was awarded to the sender, Mr. William Gray, florist, Thorngunbold, Hull.

Mr. W. J. Godfrey, nurseryman, Exmouth, sent a collection of seven novelties, though not one was successful in gaining an award. Among them was the brilliant Exmouth Rival; F. S. Vallis, a large full yellow Jap., considered to be too much like G. J. Warren, but certainly earlier; Mrs. H. Emmerton, an Australian variety, clear yellow, but darker in the centre; Wilfred H. Godfrey, bright crimson, with gold reverse; Duke of Devonshire, yellow, with faint lines of crimson on its long drooping petals; Grandeur, bright chestnut crimson with amber reverse; and The Lion, a mild looking variety which belies its name.

Mr. W. Seward, The Firs, Hanwell, sent incurved Madge Craig, pinkish salmon base, with yellow centre, a promising flower.

Mr. H. Perkins, The Gardens, Greenlands, Henley-on-Thames, had Japanese Miss Smith, a large white in the way of Mutual

Friend; and Henry Perkins, deep orange crimson, with yellow reverse; two varieties which will, no doubt, be yet seen in better condition.

Mr. G. Shawyer, Cranford, Hounslow, had a plant and some excellent flowers of his market variety Queen of Yellows, but it did not find favour with the committee.

### Croydon Chrysanthemum, October 28 and 29.

The show of this society on Tuesday and Wednesday last was an exceedingly good one. The competition for the society's Champion Challenge Cup and also for the King Edward VII. Coronation prize was keen, and some splendid flowers came from Mr. G. J. Hunt, Mr. Bible, and Mr. Salter. Where incurved blooms were shown, these were on the whole good. A pleasing feature of the Croydon Show was the presence, in very good form too, of many of the latest novelties. Amongst non-competitive exhibits were odorous Violets from Messrs. I. House and Son; Apples, Asters, and other flowers from Cheal and Sons; Alpines from Mr. J. R. Box; decorations from Mr. Butcher; and samples of their fertilisers from the Ichthemic Guano Co., Ipswich. Our notes of the fruit and vegetable competitions are secondary to the Chrysanthemum report, but both these sections were well sustained, and good produce was seen. To the secretary (Mr. W. B. Beckett) and the committee all encouragement is due for their able management of affairs.

The first prize set in class 1 fell to Mr. G. T. Hunt, gardener to Pantia Ralli, Esq., Ashted Park, Epsom, with magnificent blooms in both incurveds and Japanese. Godfrey's *Pride* was exceedingly good, as was Mafeking Hero, Mrs. Greenfield, Marquis de Venosta, Sensation, and Mrs. J. J. Thorneycroft; while the best of the incurved flowers were Hanwell Glory, Lady Isobel, Globe d'Or, Yvonne Desblanc, Golden Empress, Ada Owen, and Violet Tomlin. The second place was awarded to Mr. F. Bible, gardener to H.S.H. Prince Hatzfeldt, Chippenham, with the premier Jap. and also incurved blooms. The premier Jap. was a splendid flower of Miss E. Fulton, which was certificated at the last Drill Hall meeting. His other choice blooms were Mrs. Coombes, with a lovely green centre adding attractiveness to it; Chas. Longley, very rich; Triumph, grand form and colour; Mrs. Greenfield, small but meritorious; Mrs. T. W. Pockett, Australia, &c. The premier incurved was a typical flower of Ernest Cannell, large and finely formed. Other good varieties were Globe d'Or, Ada Owen, Lady Isobel, and Duchess of Fife. Third place fell to Mr. C. J. Salter, gardener to Mrs. Haywood, Woodhatch, Reigate, with a collection which were of high merit. Mons. Chenon de Leclé was well shown; Miss E. Fulton was large and pure; *Pride of Stokell*, rich; Ernest Bettsworth, better coloured than we have ever seen it, a splendid purple flower; W. R. Church, one of the largest and handsomest; Lord Ludlow, fair; Mrs. T. W. Pockett, good; and others but little inferior. The incurveds were smaller than those in either Bible's or Hunt's stands.

The King Edward VII. Coronation prize for ten Chrysanthemums with their own foliage, in two vases, five Japs. in one vase and five incurveds in the other (first, Silver Cup and £3; second, Gold Medal; third, Silver Medal), was won by Mr. G. J. Hunt, as already mentioned. His flowers would have done credit to him even against the best Aquarium samples. Princess Alice de Monaco, Mafeking Hero, Mrs. G. Mileham, and Mrs. J. J. Thorneycroft were shown. The second we could not discover; and Mr. C. J. Lane third.

In class 19 (single handed gardeners) the leading position for ten Japanese blooms fell to Mr. A. Dyer, gardener to C. Peacock, Esq., of Bromley Hill; second, Mr. G. Lemon; and third, Mr. A. Martin, Stroud Green Road, Croydon. Mr. Lemon led in class 21 for a dozen Japs. in nine varieties. For Pompons in class 32, the only exhibitor was Mr. W. Philpot, 57, Church Road, Croydon, with Prince of Orange, Adele Pizette, Black Douglas, La Purité, and Mme. E. Derdea.

For a group of Chrysanthemums in pots two entrants contested. Mr. W. C. Collins, Park Hill Road, was a very creditable leader; no second; and third with poor blooms, Mr. C. Walton of Whyteleafe.

In class 7 for a dozen incurved flowers, Mr. C. Lane of Caterham led with a good set, and second, Mr. C. Payne of Batchworth, whose blooms were much smaller.

In class 9 for six blooms of one variety there were half a dozen entries. Mr. C. Lane, gardener to E. H. Coles, Esq., Caterham, was foremost with Baron Hirsch, finely formed blooms; second, Mr. G. Prebble, gardener to Miss Thrall, Shirley, with the same variety; and third, Mr. C. Payne, with Globe d'Or. Mr. G. Lemon, gardener to Miss Foster, Thornton Heath, had the only exhibit of twelve incurveds in class 23, and they were very fair.

Mr. E. Mills, gardener to F. Lloyd, Esq., Coombits, Croydon, led for the six Japs of one variety with splendid samples of Mrs. Geo. Mileham. Second out of three came Mr. C. Lane with typical blooms of W. R. Church; and lastly Mr. G. Lemon, The Grange, Thornton Heath, with Silver Queen, a pink variety.

For eighteen Japs in twelve distinct varieties there was good

competition, five handsome sets being staged. With massive and well set up blooms Mr. A. Smith, gardener to the Lady Superior, The Convent, Roehampton, was a highly creditable first. His Mrs. Greenfield was simply perfect; Mrs. G. W. Palmer was rich; Miss E. Douglas also intense; Lord Ludlow also unapproachable; and Florence Molyneux a model. This was indeed a splendid collection. Mr. C. Lane was a very good second, and had nicely finished blooms of W. R. Church, Lord Ludlow, and Kimberley. Mr. C. Payne was third.

The foremost for ten Japs in one or more varieties in two vases (class 6) was Mr. C. Payne, with General Buller and Mrs. W. Popham. Mr. Bible formed a close second with Mrs. Cocinbes, which he seems to have managed to perfection, and others; while third place was taken by Mr. C. Collins.

Class 28 made a very fine display, there being a number of handsome vases of flowers. Mr. J. G. Mills, Croydon Road, Anerley, led off; second, Mr. J. J. Pittman, Dingwall Road; and third, Mr. A. G. Burgess, Cromwell Road.

Apples and Pears, as we have noted, were well shown, the chief prizewinners being Messrs. A. Smith, Roehampton; W. Jones, and J. Simmons, Oxted, who were so placed in class 10. Mr. Lintott led in class 11, and other leaders in this section were Messrs. E. Snelling and J. R. Filce, both of Croydon; O. Jeal of Waddon; G. Woolgar of Purley; W. Jones, Wallington Bridge; C. Stew, Addiscombe Road; and C. Perrett, Duppas Hill.

In class 4 for white Grapes Mr. Lintott of Marden Parker beat Mr. W. Taylor of Forest Hill; and third, Mr. T. Smith. For black the order was first, Mr. W. Taylor; second, Mr. J. Friend, Godstone; and third, Mr. J. R. Ball of South Norwood Hill. Mr. J. Friend had a magnificent collection of vegetables in class 17, for which he was accorded the premier prize.

### Shirley (Southampton) Gardeners'.

At a meeting of the Shirley Gardeners' Association lately held at the Parish Room, Mr. J. Hudson, V.M.H., of Gunnersbury Park Gardens, gave a very interesting lecture on the cultivation of Figs. In dealing with his subject, he said it was difficult to fix the date of the introduction of the Fig into Great Britain, but it could be traced back 350 years. It had not made such progress here as the Grape Vine, for it had suffered in its reputation on the ground of non-fertility, which was rather due to the fact that it was a gross feeder. Attention should be given to the roots. They ought not to be allowed to intermingle with each other. They should, when planted out, be grown on raised borders, the same as they are in Italy, and the borders should be well drained. With regard to pot culture, it was attended with excellent results, as such plants are very fertile. They did not want repotting every year; once in three years is ample. When not repotted they should have a top-dressing in the autumn, and a dressing in the summer when the fruit is forming was very useful. A good calcareous loam mixed with stable manure was the best soil, either for pots, tubs, or borders. Root-pruning should be done as soon as the leaves have fallen. For early forcing pot culture is best. The pots should be plunged in leaves. Mr. Hudson then gave other technical details of cultivation. First how to have the crop ripe by the 1st of March; and propagation by eyes and cutting was fully explained, Mr. Hudson being in favour of the latter system. After successfully tracing the growth of the Fig from the cutting to the tree, carrying a crop of ripe fruit, he gave a few hints on disease and insect pests, and a list of the best varieties for English culture, classifying them as early forcing, general, and late crops; also the best sorts to plant outside. A good discussion followed, in which Messrs. Jones, Wilcox, Miles, Payne, and Verdon took part. Certificates of merit were awarded to Mr. Verdon (of W. H. Rogers and Son, Red Lodge Nurseries) for a grand collection of Roses and Apples; Mr. Cozen, Cactus Dahlias; Mr. Tomsett, six Peaches; Mr. B. Ladhams, V.H.C., for a collection of cut flowers; and a special vote of thanks to Mr. Wright for a very fine *Salvia* (Scarlet Queen). A vote of thanks to Mr. Hudson for his excellent lecture, and to the exhibitors and Mr. Ladhams for presiding, closed a very pleasant evening. The next meeting will be held on November 17, when prizes are offered for Chrysanthemums, the prizewinners to give their method of cultivating.—J. M.

### Beckenham Horticultural.

On Friday, October 24, a lecture on the "Growth and Cultivation of Mistletoe" was given by W. Groves, Esq., Grove House, Shortlands, G. N. Hooper, Esq., presiding. When it is stated that the Mistletoe is one of the show things of the lecturer's garden, and that he has made a special study of this parasite over a number of years, it may be inferred that his discourse would be extremely interesting, which proved to be the case. It was at one time thought that the seed of Mistletoe must pass through the intestines of birds before it would germinate. The lecturer proved the fallacy of this; in fact an instance was given when, having some plants enclosed for saving seed, a thrush got in the enclosure and consumed a great portion of the berries, but no

undigested seed was discovered in the excrement of the bird. In cultivation the lecturer has only practical experience of it on the Apple tree. The first step towards success is to procure good ripe seed; failures occur through using immature seed. A piece of net must be placed over a plant in such a way as to prevent birds getting the berries. April is the best month to sow. All that is necessary is to take the berries and squeeze them on to the angle of the young wood of the Apple tree. No cutting of



*Vitis Thumbergi.*

the bark is required, pin a small piece of muslin over the seed to protect from birds and sowing is completed.

A most interesting set of young plants of Mistletoe was brought by the lecturer, showing it in all stages from the seedling scarcely discernible up to that of six years old. An interesting discussion ensued at the close, after which both lecturer and chairman were the recipients of hearty votes of thanks for their kindness. Mr. Webster placed on the table sprays of St. Joseph Strawberry carrying ripe fruit of good size, also the same of Raspberries.—T. C.



## Highgate Chrysanthemum, October 29, 30, and 31.

The eighteenth annual exhibition of the Highgate and District Chrysanthemum Society was held for the first time in the Alexandra Palace, Muswell Hill, London, on the above dates. The show was an excellent one in all quarters, and there being ample space for the many tables, an imposing display was provided. The blooms in the leading vase class, and in class 4, were of high merit. Competition was fairly keen all through, and a number of non-competitive groups were forward. Messrs. Wells and Co., Limited, had choice new Chrysanthemums; Messrs. B. S. Williams and Son, of Upper Holloway, had table plants, Cyclamens, Ericas, *Spiræa palmata*, Ferns, and Orchids. Messrs. Cutbush and Son, Highgate, N., contributed *Begonia Gloire de Lorraine*, Lily of the Valley, and *Liliums* retarded; *Erica gracilis*, white Tree Carnation Mrs. J. S. Brookes, and purple-leaved Vines.

Bottled fruits were sent by Messrs. Austin and Co., of Kingston-on-Thames; Messrs. Wood and Son had their Velthea, also syringes, stakes, canes, Orchid peat, raffia, and many other sundries. The Ichthemie Guano Co. sent their fertilisers: Pearce and Co., Holloway Road, had model greenhouses and frames; H. Williams and Son, Fortis Green, Finchley, staged well-grown Chinese *Primulas* in flower; while Mr. J. Russell, of Richmond, had a collection of Apples.

Miss A. M. Bevan, The Lodge, East End Road, East Finchley, N., very tastefully arranged a dinner table with fruit, flowers, china, cutlery, &c.; there being *Crotons* and *Cocos Weddelliana* on the table, with good Japanese, incurved, and Pompon flowers, and excellent Grapes, Melons, Pears, Apples, and Nuts. A painting of Mr. Godfrey's variety, The Masterpiece, was also staged on a side table.

The show arrangements were admirably managed by the hard-working secretary, Mr. W. E. Boyce, and committee. The Earl of Mansfield, president, opened the exhibition at three o'clock. Numerous special prizes were offered by trade firms and by private individuals.

Mr. Witty, Highgate Cemetery, won the tempting prize in class 1, of 10 guineas and a Silver-gilt Medal, for a floral display of Chrysanthemums, any varieties, but must include Japanese, incurved, reflexed, and Pompons. Mr. G. Saunders was second. The two groups were disappointing.

The large vase class (No. 2) was one of the great features of the exhibition, and some really magnificent flowers were here shown. For twelve vases with distinct varieties Mr. J. Brookes, gardener to W. J. Newman, Esq., Totteridge Park, Totteridge, was an excellent leader with massive and highly coloured blooms of the following: M. L. Remy, G. W. Palmer, Mrs. J. Bryant, Miss E. Fulton, Mrs. G. Mileham, Mrs. T. W. Pockett, Millicent Richardson, J. R. Upton, Mrs. Barkley, W. R. Church, Australie, and A. H. Barratt. The best were Miss E. Fulton, Mrs. G. Mileham, and Australie. Second in this class came Mr. G. J. Hunt, from Ashted Park, Epsom, Surrey, whose blooms were rich in colour and very good. His *Pride of Madford* was excellent; Mrs. J. Bryant very fair; Edith Tabor good; and Ernest Bettsworth also very fine. Third came Mr. J. Kirkwood, Grass Park House, Finchley, with smaller blooms, his best being Master C. Seymour, Mrs. Coombes, Alice Byron, Mrs. Greenfield, and Mrs. G. Mileham.

Two competitors were forward for six vases of incurved blooms distinct, the leader being Mr. G. J. Hunt with flowers of good colour, purity, and fair size. He staged *Lady Isobel*, John Lambert, Hanwell Glory, and Ada Owen in splendid condition. A good second set came from Mr. A. Jones, Hadley Manor, Barnet, with fine samples of Mrs. N. Molyneux, Gen. Symonds, and Louisa Giles. Three entered.

For Messrs. Wells and Co.'s prizes in class 4, Mr. J. Brooks, of Totteridge Park, led off with a creditable dozen blooms. Mrs. Pockett, W. R. Church, Mrs. G. Mileham, Calvat's Sun, and Chas. Longley were the best; but all of the set were good. Mr. G. J. Hunt was considerably behind, but had a good Mrs. Mileham. No third.

Mr. T. L. Turk, gardener to T. Boney, Esq., Southwood House, Highgate, led in class 5 for a group of Chrysanthemums, and included some very pretty Pompons. Second in the same class fell to Mr. G. Saunders, 13, Victoria Cottages, Archway Road, Highgate, but the plants were rather tall. In class 6,

the first fell to Mr. C. J. Webber, 6, Colney Hatch Lane, Muswell Hill; and second, Mr. J. Adams, gardener at Hillside, Fitzroy Road, N., both with fresh-like groups.

The table decorations furnished quite a leading feature. In class 8 for a decorated table, Mr. D. B. Crane was adjudicated first position with a rich display; Mrs. Wheaton, of Tenterdown, Muswell Hill, formed a capital second; and third out of six, came Miss Saunders, with a fourth to Mr. D. M. Oliver. For a similar entry, class 10, Mr. D. B. Crane was again leader; Mr. Oliver and Mr. G. Shrimpton following so.

For six vases of Japanese blooms, class 9, Mr. T. L. Turk well deserved the leading place; Mr. J. Stonebridge, Bishopwood, was second, but no third competitor entered. Mr. Brookes led off in class 42 for a dozen Japs. arranged with foliage and grasses; and second, Mr. J. Stevens, of Thirsk Lodge, Stanhope Road, N.

Mr. J. Brookes was foremost for a vase of six Japs.; Mr. G. Frost, East Hill, Oakley Park, second; and Mr. J. Sandford, Woodhouse, North Finchley, third. These were specially attractive. In class 16 for a vase of Pompons arranged with foliage for decorative effect, the winners were: First, Mrs. S. North, Broughton Lodge, Shepherd's Hill, N.; second, Mr. D. B. Crane, Woodview Terrace, Archway Road, N.; third, Mr. S. Foster, Tenderden Hall, Hendon.

Mr. D. B. Crane was to the fore with a vase of a dozen sprays of Chrysanthemums, showing richly-coloured flowers; the second and third places going to Mr. G. Saunders and Mr. A. Jones respectively out of seven lots. In class 17, for three buttonholes, two gent's and one lady's, the honours were divided by Mr. J. Callingham, gardener to H. Harmsworth, Esq., North End Place, Hampstead, who led; Mr. T. L. Turk, second; and Mr. C. H. Martin third. Nine entered. For a hand bouquet of Chrysanthemums, Mr. E. H. Chitty, Cholmeley Lodge, Highgate, beat Mr. G. Saunders, and third out of five came Mr. D. M. Oliver, 97, Tollington Park, N. Mr. T. L. Turk and Mr. J. Adams were placed in this order for two vases of blooms, and these were certainly decorative. Mr. H. Rand, of 106, St. John's Road, Upper Holloway, led in class 22, for three buttonhole bouquets. There were seven entrants.

Four contested their skill in arranging a centre piece for dinner table decoration; but here Mr. Crane was not to be beaten. Mr. Halsey came second, and Mr. A. Sedgwick third; all were creditable and very pleasing.

Mr. G. Impey beat Mr. J. Brookes for the twenty-four Japs., and third, Mr. J. Sandford; but none of the newer varieties were seen. These were fine collections. In class 47, for twelve Japs. and twelve incurveds, Mr. Turk was premier, and Mr. J. Adams followed second. Mr. Turk also led for twenty-four Japs. in eighteen varieties in class 25; Mr. C. J. Webber succeeding as second; and third, Mr. S. North.

Seven entries of half a dozen Japanese blooms each, made a fine show for class 32, the leader being Mr. W. J. Bennett, gardener to J. B. Braithwaite, Esq., The Highlands, New Barnet. His set included G. W. Palmer, *Chenon de Leché*, Mme. de Blanche, Gustave Henry, Lily Mountford, and Le Grand Dragon. Following came Mr. G. Impey and Mr. A. Jones in this order. Six were forward for the half-dozen of one variety; the leader being Mr. J. Kirkwood with Mrs. G. Mileham; second, Mr. J. Brookes with the same; and Mr. Bennett third with Mrs. Coombs.

Messrs. G. Saunders and H. Stonebridge were so placed for a specimen trained plant, and Mr. Stonebridge was the only exhibitor of four trained plants. Mr. G. J. Bone, of Calverly Grove, Upper Holloway, staged six nice Japs. in class 56, and was also first for the twelve in class 53. The only noteworthy collection of Anemone-flowered varieties in the show came from Mr. J. Sandford, in class 37. For six blooms of one variety of incurved, the order ran: First, Mr. J. Kirkwood, with *Globe d'Or*; second, Mr. J. Sandford, with Chas. Curtis; and third, Mr. H. Currell with *Jeanne d'Arc*.

Grapes were staged by four competitors. Mr. J. Sandford, of Woodhouse, was first for three bunches of black Grapes, and Mr. Kirkwood second. The collections of vegetables were not judged at 1.30 when our notes were concluded.

## Young Gardener's Domain.

### Duty.

The chilly nights of autumn will soon be with us again, and the thoughts of many a young gardener will be turning, perhaps with not altogether pleasurable anticipation, towards what cannot at any time be said to be the most attractive of the numerous duties he is called upon to perform, namely, that of stoking. "To take turn on duty," or "Fires every alternate week"—phrases so often noticed in advertisements—are not presumably

inserted as inducements, but with the object of warning the intending applicant for employment of what he may expect.

Most of us at some time or other have probably come across the kindly and sentimental old gentleman who will smilingly say that a gardener's life must be the happiest imaginable. He will talk of the lovely flowers and the charming trees, and will wax eloquent on the unparalleled opportunity the horticulturist possesses of observing and admiring the same, and of reflecting on the manifold wonderful and glorious works of Nature. (This reflecting process, by the way, should be carried out when one's employer is not looking.) But there is reason to believe that many a young gardener, as he has gone his rounds on a cold winter night, thinking of his colleagues seated round the bothy fire, or of the concert or party he might have enjoyed had not the inexorable night duty stood in his path, has reflected, not without reason, that in spite of what the old gentleman has said his occupation is not altogether a continued round of pleasure. It must be admitted that making up the fires, especially where a good heat is to be maintained and the weather is cold, and the thermometer, with shameless obstinacy, refuses to indicate the temperature it ought, is not a job to be envied. The average gardener, however, soon learns to become a bit of a philosopher, and to look forward to his turn at the fires with equanimity, if not with eagerness, as something that has to be done, and to find out that grumbling will shovel no fuel on, and complaints pull no clinkers out.

There are, of course, fires and fires, as well as stokers and stokers. Happy is the gardener at a place where the heating apparatus throughout is of modern construction compared with those of his brethren whose lot it is to have the care of furnaces erected when the principles of heating were not so well understood as they are now, and the convenience of the stoker was not considered at all. He who has never had to make up a fire where the furnace door was so small that if, after becoming dexterous by practice, he could put on one-fourth of the fuel he shovelled up he thought himself lucky, he who has not taken healthy exercise walking backwards and forwards, shovel in hand, because some antediluvian constructor of stokeholes laboured under the delusion that the proper place for the fuel was as far away from the fire as possible, or has never skinned his knuckles owing to the restricted space allowed for the manipulation of his fire-irons, or beheld some morning, after a night's rain, a flood below, causing him to ask himself whether his employer has taken it into his head to provide his gardeners with a swimming-bath, has not had his full measure of experience in the matter of stoking.

It is strange what one man can do in the way of firing compared with another. While one will manage to maintain an equable temperature with little apparent effort, another, with infinite labour, with poking and clinkering, and a vast expenditure of fuel, will not do half so well. It may not be possible for anyone, however clever, to keep a house at exactly the same temperature to within the proverbial "half a degree," but bad or good stoking is not without its effect on the plants, an effect of which they would surely not be slow to express their appreciation or the reverse, were they only able to speak. It does not require a very great flight of fancy to imagine a fine *Anthurium* remarking to a neighbouring *Gardenia*, "Well, Jones is on duty this week, and we can depend on being comfortably warm all night; I only wish he were on all the year round." Or to picture a *Dracæna terminalis* observing to its friend, the *Stephanotis floribunda*, "H'm, Brown making an ass of himself at those fires again; I wonder whether we shall be scorched to a cinder this time or frozen almost to death. He seems to think we plants have no feelings."—A. W. D.

### TRADE NOTE.

#### Dissolution of Partnership.

The firm of John Laing and Sons, nurserymen, Forest Hill, has been dissolved by mutual consent, and the business will in future be carried on by John Alexander Laing.

#### An Insect Exterminator.

New preparations for use against insect pests are continually being brought to our notice, and we have here to acknowledge the receipt of a tin of Valls' Beetlecute. This is a white, refined powdery substance, reputed to be an infallible exterminator of beetles, cockroaches, ants, and insect pests; and any cheap preparation that will banish and overcome the pests we specifically name, should indeed be accorded a welcome trial. "In the glass houses and gardens of the Royal Botanic Society, Regent's Park, London, Beetlecute has been most successful, not only in the destruction of beetles and cockroaches, but in the complete extermination of ants." The sole proprietors are Messrs. Valls and Co., and supplies are furnished through their agents, Messrs. Burgoyne, Burbidges, and Co., 12 and 16, Coleman Street, London, E.C.



### Hardy Fruit Garden.

**PLANTING FRUIT TREES.**—The earlier trees and bushes of all kinds of fruit can be planted now the better. If the soil has been judiciously prepared to suit the different kinds of fruit, the work of planting may be expeditiously carried out, and a good start made towards a free and vigorous growth next season. There are great advantages in autumn planting. The soil is usually in such a suitable condition as regards warmth, moisture, and fertility, also workable conditions, that roots have a chance of forming some new fibres before the winter. This is an important help for next spring, when growth will start away vigorously.

**THE SOIL.**—The best must, of course, be made of the existing soil in the position where the trees are to be planted. Soil can always be deepened, and this must be done, the average depth most suitable as a run for the roots being 2ft. In light, dry, stony positions more may be necessary. A shallow soil, that is, one consisting of not more than a foot in depth of fertile material, must be removed to that depth, and the spit below either broken up and manured or removed, replacing with good loam, which is neither very light nor absolutely heavy.

**DRAINAGE.**—Breaking up the bottom spit of soil is generally a good method of draining, but only acts well in a naturally drained soil. Water-logged ground must be drained. Large plots or quarters should have an arrangement of pipes with a fall to a main drain having a proper outlet. Stations where trees are to be planted may, if found to be very wet, be simply drained by placing a layer of rubble at the bottom of the hole, covering with turf grass side downwards. Some positions may be improved by planting on raised mounds from which much of the superfluous moisture can readily drain away.

**MANURING.**—In preparing the soil the question of manuring comes in. Good, fertile soil which will grow good vegetables, as a rule, needs no addition of manure. It is best not to apply it for Apples, Pears, and all stone fruits. The latter need a soil charged with calcareous or mineral matter. In a rich soil, too, strong growth will result, which will cause a difficulty in management without frequent lifting and replanting of the trees.

**SELECTION AND TREATMENT OF TREES.**—The importance of securing good specimens of whatever form of tree is to be planted is obvious. This matter will be assured if the trees are procured from the reliable fruit nurserymen, who not only send out excellent trees, but pack them so that they suffer only a minimum of injury by the removal. When the cultivator receives them the after responsibility lies with him as to their treatment. It is desirable to unpack them at once, providing the weather is mild. Prune away all damaged roots to sound parts, and carefully lay them in the soil until the trees can be permanently planted. The object is to keep the roots from drying, especially the youngest fibres.

**PREPARATION OF HOLES.**—Proper planting, which includes the careful arrangements of the roots, has a considerable influence in the after growth and ultimate success of the trees. Deep planting is not to be recommended, hence the holes for the reception of the roots should be thrown out shallow, but of a width commensurate with the length of the roots when spread out horizontally. The base of the holes may be raised a little in the centre, making firm.

**PLANTING.**—On placing the trees or bush in position, equalise the roots all round as far as possible, and do not place the stem lower than before. Where the roots are thick and numerous divide them into layers, covering each layer with fine soil mixed with some burnt refuse, which should be scattered over from the stem outwards. This prevents the ends of the roots being turned up, which might be the case if spread at haphazard. The upper layer of roots ought not to be buried deeper than 3in. Make the layers of soil firm, not, however, by treading heavily, thus injuring the roots. Pressing down the soil and working it well in among the roots is the best method.

**STAKING.**—Immediately tall standards, or any form of trees which require support, are planted, stakes must be fixed and the stems tied. This is necessary to prevent wind rocking the trees about, displacing the roots, and preventing the establishment of the trees. Cloth or sacking may be wound round the stems, and the trees secured with strong cord or tar twine. Wall or espalier trees must not be securely tied at first, but loosely held in position, so that the soil and the trees may settle together. It is really best not to permanently secure until spring, by which time the soil will have become consolidated and the trees firmly settled in position.



**MULCHING.**—A winter mulching acts beneficially in preventing frost reaching the roots. It is not intended the first season to apply a mulching for the purpose of fertilising the soil, as this is not required. Therefore the material used should be loose and light rather than heavy and compact. Half-decayed manure is as good as anything. Spread it as far as the roots extend to the thickness of 3in.—EAST KENT.

### Fruit Forcing.

**CHERRY HOUSE.**—The trees having cast their leaves should be pruned. Cut back to within an inch of the base shoots which were made during the summer and stopped at the fifth joint. This applies to all spur growths, but the extensions and growths for forming branches to furnish the trees should not be shortened unless they have reached the extremity of the trellis, or when it is necessary to multiply the branches another season. The house should then be thoroughly cleaned and the trees washed with a tepid solution of paraffin emulsion, 4oz to a gallon of water, adding 3oz of sulphide of potassium, then limewash the walls with best fresh lime. Train and tie the trees to the trellis. Clear away all prunings and other matter. Remove the loose material, whether mulchings or soil, on the border. If the roots are near the surface and fully occupy the soil, a light pointing over may be all that is necessary prior to top-dressing with an inch or two thickness of fresh loam; but no opportunity should be lost of removing inert soil and changing it for fresh turfy loam of a calcareous nature. The roof lights being off, they need not be replaced until the time of starting or the approach of severe weather. Under fixed roofs attention will need to be given the borders for watering, keeping them evenly moistened, ventilating the house fully up to starting.

**VINES—EARLY FORCED IN POTS.**—Where thin-skinned Grapes are required in March and April the Vines should now be placed in position on loose brick pillars, so that the rims of the pots will be slightly above the edge of the pit, and this being filled with Oak, Beech, or Spanish Chestnut leaves they will give out heat and moisture steadily through the early stages of growth, and rich stimulating food from their decay during the swelling of the fruit, when it requires all the support that can be given. Take care that the heat about the pots does not exceed 70deg to 75deg, supplying water only to keep the soil moderately moist, as a wet condition of the soil does not favour speedy and healthy root action. Allow the canes to fall into a horizontal position, over the fermenting material until they have broken, but not permitting them to rest upon the moist and warm bed. Syringe the paths, walls, and canes two or three times a day, but sufficiently early for the last time each day to allow of the canes becoming fairly dry before nightfall. Maintain a temperature of 55deg at night and 60deg to 65deg by day, with a free circulation of air at and above that temperature, and close early in the afternoon.

**LATE HAMBURGH HOUSES.**—The atmosphere in which bunches of thin-skinned Grapes are hanging cannot be too carefully attended to, as the berries are very susceptible to injury from excessive moisture, while if kept too dry and warm they are liable to shrivel. A gentle movement of the atmosphere will prevent the decomposition of moisture on the berries, and where ventilation cannot be given, a little warmth in the hot water pipes will keep the air in motion, and the moisture will be condensed on the glass so long as the external air is cooler than that of the house. A steady temperature of 50deg, with a little warmth in the pipes, and liberal ventilation on fine days, will suit the Vines during the fall of the leaf, when, unless the house is well adapted for keeping them, the bunches may be cut, bottled, and placed in the late house or a cool, dry room. The border must be kept fairly moist, or the Grapes will shrivel, even while the leaves are on the Vines.—ST. ALBANS.

### Trade Catalogues Received.

- James Cocker and Sons, Rose Specialists and General Horticulturists, Aberdeen.—*Roses, Plants, Shrubs, Fruit Trees, &c.*
- Damman and Co., Seed and Bulb Merchants, San Giovanni a Teduccio, near Naples, Italy.—*General Price List.*
- M. Herb (ex. Herb and Wulle), Naples, Italy.—*Novelties for 1903.*
- Jardins Correvon, "Floraire," Chêne Bourg, Geneva, Switzerland.—*Catalogue of Plants.*
- Harlan P. Kelsey, Highlands Nursery, Kawana, N.C., and Tremont Building, Boston, Mass.—*Hardy American Plants.*
- John Peed and Son, Mitcham Road, Streatham, S.W., and Roupell Park Nurseries, West Norwood, S.E.—*Hardy Perennial Plants, Florists' Flowers, and Alpines.*
- Pinehurst Nurseries, Pinehurst, North Carolina, U.S.A.—*Wholesale Trade List.*



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

### Plan of a Bothy—Competition.

"Well-wisher" promises a first prize of £3, and the Editor supplies a second prize of £1.

The rules of the competition are as follows:—The plan, drawn to scale, must not exceed 7in broad by 7in deep, and must be clearly defined on stout paper. The plan must provide suitable accommodation for six men, and the cost of the building ought not to exceed £200 to £220. A statement of the general items of cost should accompany the plans, together with any written comments thereon. The competition is open until Christmas, 1902, by which date all plans must be in the hands of the Editor. The sender's name and full address should be enclosed when sending the plan, and the sender will alone be held responsible for it.

**NAMES OF APPLES (Susséx).**—The reply was intended for you, "X. Z. A."

**RULES FOR A VILLAGE FLOWER SHOW (R. L.).**—We have forwarded to you what may be a useable or adaptable set of rules for a society such as yours.

**CONTRIBUTION OF 2s. (J. P.).**—We received the 2s. and handed it to Mr. B. Wynne, secretary of the Royal Gardeners' Orphan Fund, who has returned a receipt.

**SECRETARY U. H. B. AND P. S. (E. Smith).**—Mr. William Collins, 9, Martindale Road, Balham, London, S.W., is secretary of the United Horticultural Benefit and Provident Society.

**FERN FOR STAND IN NORTH WINDOW (L. C.).**—It is not possible to determine the name of a Fern from a single division of the fronds, but we think it is *Cyrtomium falcatum*, which is nearly if not quite hardy, and as such would be suitable for a stand in a north window. *Asplenium flabellifolium* is a charming small Fern for suspending in glass cases, but in the position you name it would not succeed in winter. It requires to be kept from frost.

**AJUGA REPTANS PURPUREA PROPAGATION (C. P. B.).**—It has dark purple bronze foliage, and forms a good contrast to Golden Feather Pyrethrum, and is the best in spring, being very valuable for spring bedding. It is propagated by cuttings of two joints and the growing point inserted in sandy soil, kept moist, and shaded from sun; or they may in summer, or even now, be put in on a north border, but would root at this season more freely in a frame. Plants for spring bedding ought to be struck early in summer, and should be nice plants by autumn. It is perfectly hardy.

**PLUM TREES UNFRUITFUL (Amateur).**—The trees would be best lifted as soon as the leaves turn yellow and begin to fall. Take out a trench about 3ft from the stem, cutting off all roots and lift the trees with the roots in the space towards the stem, cutting off any roots that go down. After putting some soil under, replace the tree and fill-up, treading the ground firmly. The trees should be kept rather high, the uppermost roots about 6in above the surrounding ground level, and cover them about 3in deep with fresh soil, making firm, and mulching over the roots with littery manure. It is not desirable to defer the pruning until spring with a view to protect the blossom from frost. If summer pruning were properly attended to, very little winter pruning would be required.

**EDGING PLANTS FOR BORDER ON LAWN (M. H. M.).**—For a permanent edging to a border on grass, Ivies of the green kinds would not be suitable, as they would not contrast unless you had the border raised, and then they would answer admirably. The small-leaved kinds are most suitable, as *Hedera Donolieriensis* and *H. taurica*. The best silver is *H. Helix elegans*. *H. Helix foliis variegatis* is also good. The edging may be raised with stones, over which the Ivies will run and cling to, and soon form a close edging. The *Euonymus radicans variegatus*, with green leaves broadly margined with white or silver, is excellent for edging; *E. flavescens*, with leaves of a deep chrome yellow, is also good, and might with cutting be kept to the height you require, it being of free growth, but compact. The variegated Thymes are desirable edging plants; one variegated yellow, *Thymus citriodorus aureo-marginatus*; and the other white, *T. variegatus*.

**NAMES OF PLANTS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (N. T.).—1. *Quercus rubra*; 2. *Quercus cerris*; 3. the Black Walnut, *Juglans nigra*. (J. T.).—1. *Polygonum polystachyon* (syn. *P. molle*); 2. *Tropaeolum Fireball*; 3. *Calceolaria Burbridgei*; 4. *Crocus speciosus*. (N. B.).—1. *Oncidium Forbesi*; 2. *Cattleya Lodigesi*; 3. *Oncidium incurvum*; 4. *Vanda caerulea*; 5. *Phalaenopsis amabilis* var. (B. B.).—Next week. (W. M.).—Currants badly infested with mite; destroy them by burning.

**NAMES OF FRUITS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (C. N.).—1. Ribston Pippin; 2. Gascoigne's Scarlet Seedling; 3. Reinette Van Mons; 4. Baumann's Red Reinette; 5. Manx Codlin; 6. Warner's King. (Enquirer).—1. Cellini Pippin; 2. ditto; 3. Cox's Orange Pippin; 4. Adam's Pearmain; 5. Reinette de Canada; 6. Benoni. (Thirty Years' Subscriber).—1. Cox's Pomona; 2. bad specimen, not in character; 3. Dutch Mignonne; 4. Duchesse d'Angoulême. (J. P.).—1. Bielo Borodowka; 2. King of the Pippins; 3. Blenheim Orange; 4. a seedling form of No. 3, of which there are many about the country; 5. Scarlet Nonpareil.

## Covent Garden Market.—October 29th.

### Average Wholesale Prices.—Fruit.

|                           | s. d. | s. d.  |                            | s. d. | s. d.  |
|---------------------------|-------|--------|----------------------------|-------|--------|
| Apples, Blenheims, bush.  | 7 0   | to 8 0 | Grapes, Alicantes          | 0 9   | to 1 6 |
| " culinary, bush.         | 3 0   | 6 0    | " Colman                   | 0 9   | 1 6    |
| " King Pippins, ½-sieve   | 5 0   | 6 0    | Lemons, Naples, case       | 35 0  | 0 0    |
| " Cox O. Pippins, ½-sieve | 8 0   | 10 0   | Melons, each               | 1 0   | 1 6    |
| Bananas                   | 8 0   | 12 0   | Oranges, case              | 16 0  | 21 0   |
| Cobs and Filberts, lb.    | 0 3½  | 0 0    | Peaches, doz.              | 3 0   | 6 0    |
| Figs, green, doz.         | 2 0   | 4 0    | Pears, dessert, ½-sieve    | 3 0   | 6 0    |
| Grapes, Hamburgh, lb.     | 0 9   | 1 6    | " stewing, ½-sieve         | 2 6   | 3 6    |
| " Muscat                  | 1 0   | 3 0    | Pines, St. Michael's, each | 2 6   | 5 0    |
|                           |       |        | Plums, ½-sieve             | 4 0   | 5 0    |

### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                            | s. d. | s. d.   |                              | s. d. | s. d.  |
|----------------------------|-------|---------|------------------------------|-------|--------|
| Aralias, doz.              | 5 0   | to 12 0 | Foliage plants, var, each    | 1 0   | to 5 0 |
| Araucaria, doz.            | 12 0  | 30 0    | Grevilleas, 48's, doz.       | 5 0   | 0 0    |
| Aspidistra, doz.           | 18 0  | 36 0    | Lycopodiums, doz.            | 3 0   | 0 0    |
| Chrysanthemums             | 6 0   | 12 0    | Marguerite Daisy, doz.       | 4 0   | 6 0    |
| Crotons, doz.              | 18 0  | 30 0    | Myrtles, doz.                | 6 0   | 9 6    |
| Cyperus alternifolius doz. | 4 0   | 5 0     | Palms, in var., doz.         | 15 0  | 30 0   |
| Dracæna, var., doz.        | 12 0  | 30 0    | " specimens                  | 21 0  | 63 0   |
| " viridis, doz.            | 9 0   | 18 0    | Pandanus Veitchi, 48's, doz. | 24 0  | 30 0   |
| Erica gracilis             | 8 0   | 9 0     | Primulas                     | 4 0   | 5 0    |
| Ferns, var., doz.          | 4 0   | 18 0    | Shrubs, in pots              | 4 0   | 6 0    |
| " small, 100               | 10 0  | 16 0    | Solanums                     | 5 0   | 8 0    |
| Ficus elastica, doz.       | 9 0   | 12 0    |                              |       |        |

### Average Wholesale Prices.—Vegetables.

|                               | s. d. | s. d.  |                        | s. d. | s. d.  |
|-------------------------------|-------|--------|------------------------|-------|--------|
| Artichokes, green, doz.       | 2 0   | to 3 0 | Lettuce, Cabbage, doz. | 0 6   | to 0 0 |
| " Jerusalem, sieve            | 1 6   | 0 0    | " Cos, doz.            | 0 6   | 0 9    |
| Batavia, doz.                 | 2 0   | 0 0    | Marrows, doz.          | 1 0   | 0 0    |
| Beans, Scarlet Runner, bushel | 1 6   | 2 0    | Mint, doz. bun.        | 4 0   | 0 0    |
| Beet, red, doz.               | 0 6   | 0 0    | Mushrooms, forced, lb. | 1 0   | 0 0    |
| Cabbages, tally               | 3 0   | 0 0    | Mustard & Cress, pnnt. | 0 2   | 0 0    |
| Carrots, new, bun.            | 0 2   | 0 0    | Onions, bushel         | 3 0   | 4 0    |
| Cauliflowers, doz.            | 1 6   | 0 0    | Parsley, doz. bnchs.   | 2 0   | 0 0    |
| Corn Salad, strike            | 1 0   | 1 3    | Peas, blue, bushel     | 6 0   | 0 0    |
| Cucumbers doz.                | 2 6   | 4 0    | Potatoes, cwt.         | 3 0   | 6 0    |
| Endive, doz.                  | 1 6   | 0 0    | Radishes, doz.         | 1 0   | 0 0    |
| Herbs, bunch                  | 0 2   | 0 0    | Spinach, bush.         | 2 0   | 2 6    |
| Horseradish, bunch            | 2 6   | 0 0    | Tomatoes, English, lb. | 0 4   | 0 5    |
| Leeks, bunch                  | 0 1½  | 0 2    | " Jersey...            | 0 3   | 0 0    |
|                               |       |        | Turnips, bnch.         | 0 2   | 0 3    |

### Average Wholesale Prices.—Cut Flowers

|                                   | s. d. | s. d.  |                                 | s. d. | s. d.   |
|-----------------------------------|-------|--------|---------------------------------|-------|---------|
| Arums, doz.                       | 5 0   | to 0 0 | Lily of Valley, 12 bnchs        | 12 0  | to 18 0 |
| Asparagus, Fern, bnch.            | 1 0   | 2 0    | Maidenhair Fern, doz. bnchs.    | 5 0   | 6 0     |
| Bouvardia, coloured, doz. bunches | 6 0   | 0 0    | Marguerites, white, doz. bnchs. | 2 0   | 0 0     |
| Carnations, 12 blooms             | 1 3   | 1 9    | " yellow, doz. bnchs.           | 1 0   | 0 0     |
| Cattleyas, doz.                   | 12 0  | 0 0    | Myrtle, English, per bunch      | 0 6   | 0 0     |
| Chrysanthemums, doz. bun.         | 3 0   | 4 0    | Odontoglossums                  | 4 0   | 0 0     |
| " doz. blooms                     | 1 0   | 4 0    | Orange blossom, bunch           | 2 0   | 0 0     |
| Croton foliage, bun.              | 0 9   | 1 0    | Roses, Niphetos, white, doz.    | 1 0   | 2 0     |
| Cycas leaves, each                | 0 9   | 1 6    | " pink, doz.                    | 2 0   | 0 0     |
| Cypripediums, doz.                | 2 0   | 3 0    | " yellow, doz. (Perles)         | 1 6   | 2 0     |
| Eucharis, doz.                    | 2 6   | 3 0    | " Generals...                   | 0 6   | 1 0     |
| Gardenias, doz.                   | 2 0   | 0 0    | Smilax, bunch                   | 2 6   | 0 0     |
| Geranium, scarlet, doz. bnchs.    | 4 0   | 0 0    | Stephanotis, doz. pips          | 2 6   | 3 0     |
| Ivy leaves, doz. bun.             | 1 6   | 0 0    | Stock, double, white, doz. bun. | 2 0   | 3 0     |
| Lilium Harrisii                   | 4 0   | 0 0    | Tuberose, dozen                 | 0 4   | 0 6     |
| " lancifolium alb.                | 1 6   | 0 0    | Violets, doz. bun.              | 1 6   | 2 0     |
| " l. rubrum                       | 1 0   | 0 0    |                                 |       |         |
| " longiflorum                     | 4 0   | 0 0    |                                 |       |         |

## Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.         | Direction of Wind. | Temperature of the Air. |           |           |           | Temperature of the Soil.<br>At 9 A.M. |           |                |                | Lowest Temperature on Grass. |
|---------------|--------------------|-------------------------|-----------|-----------|-----------|---------------------------------------|-----------|----------------|----------------|------------------------------|
|               |                    | At 9 A.M.               |           | Day.      | Night.    | At 1-ft. deep.                        |           | At 2-ft. deep. | At 4-ft. deep. |                              |
|               |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   | Ins.                                  | deg.      | deg.           | deg.           |                              |
| 1902.         |                    |                         |           |           |           |                                       |           |                |                |                              |
| October.      |                    |                         |           |           |           |                                       |           |                |                |                              |
| Sunday ...19  | E.N.E.             | deg. 36.8               | deg. 36.3 | deg. 56.6 | deg. 33.3 | Ins. 0.09                             | deg. 49.6 | deg. 52.8      | deg. 54.1      | deg. 25.4                    |
| Monday ...20  | S.S.W.             | 52.4                    | 50.5      | 62.2      | 36.5      | 0.05                                  | 50.0      | 52.3           | 54.0           | 33.9                         |
| Tuesday ...21 | S.W.               | 47.4                    | 44.9      | 57.9      | 39.5      | 0.06                                  | 50.7      | 52.3           | 54.0           | 27.9                         |
| Wednesday 22  | S.W.               | 50.7                    | 49.5      | 55.4      | 39.0      | —                                     | 49.2      | 52.2           | 53.8           | 27.4                         |
| Thursday 23   | S.S.E.             | 45.1                    | 44.2      | 54.1      | 36.4      | —                                     | 48.2      | 51.7           | 53.5           | 27.0                         |
| Friday ...24  | S.S.E.             | 46.6                    | 46.2      | 57.4      | 40.0      | —                                     | 49.2      | 51.3           | 53.4           | 34.3                         |
| Saturday 25   | S.W.               | 53.4                    | 50.3      | 60.4      | 46.5      | 0.02                                  | 50.6      | 51.5           | 53.2           | 44.8                         |
| MEANS ...     |                    | 47.5                    | 46.0      | 57.7      | 38.7      | Total. 0.22                           | 49.6      | 52.0           | 53.7           | 31.5                         |

The weather during the week was rather dull and heavy, with intervals of bright sunshine. Small quantities of rain fell on four days.



## Storing Mangolds.

The season has been too cold and late for the Mangold crop, and the promise of a heavy weight of roots has not been realised. The plant is a good one, but the Mangolds are not big enough to fill the carts quickly. The tops are still very green and full of growth, and if we were sure that frost would not intervene we might leave them to grow until Martinmas; but experience teaches that as November approaches severe frost does put in an appearance, and therefore if we wish to make the crop safe we had better take them up at once.

The Long Red and Tankard varieties should be taken up first, as they not only ripen first, but stand more out of the ground, and are, therefore, more liable to injury. Long Reds are much less popular than they were; it is seldom we see a piece now. One was observed the other day, and it presented a most promising appearance to a casual glance. A closer inspection, however, revealed the fact that the plot of Globe Mangold adjoining was decidedly of heavier weight, had less top, was deeper in the ground—in fact, better altogether.

The usual way to take up Mangolds is to pull the root up, cut the top off with a knife, leaving the roots untouched. The Mangolds are then carted into a pit, or pie, which, if the roots are ripe, may be made 10ft or 11ft wide. Whatever the bottom width they must be thrown well up, so as to get the ridge of the pie as high and steep as possible. This is important, for it is not always convenient to spare good Wheat straw for storing the Mangold, and if we have to use Barley straw or bracken or grass from the ditch banks, though these materials are good enough to keep frost off, they do not make good thatch, and if we let the roots get wet during the sweating process, we might have our pies falling in, and heaps of corruption instead of sound and valuable roots. In the interests of dryness it is advisable to soil the pies at once, but a 2ft opening should be left along the ridge until all sweating is over.

Taking Mangolds up is generally done by piecwork, 9s. to 11s. per acre being given for pulling them and filling them into carts. They are generally pulled, the tops cut off, and left in rows for carting, four rows being thrown into one. The cart comes between two of these quadruple rows, and is filled from each side.



Another system is to throw the pulled Mangold into small heaps, and then cover the heaps with Mangold leaves until it is found convenient to cart them to the pie. This is more expensive if labour for the pulling and heaping does not include the filling of the carts as in the before-mentioned system. The men would prefer to fill the carts rather than heap them at the same price. Straw is plentiful this year, so there is no reason to grudge a good covering to the Mangolds. They are as susceptible to frost and injury as Potatoes, but not so liable to damage from wet, so a good thick and dry covering is more material than thatch as a protection.

As the season has been cold and damp, and the soil is now of a decidedly sodden character, it is from every point of view desirable to waste no time in storing our Mangolds. The crop is not heavy, and it might greatly increase during the next month if frost kept off; but a severe frost might be so fatally injurious to the finest crop as to make us very wary of running risks of that kind.

### Manurial Waste.

Farmers, and even the best of them, are often slow to take advantage of opportunities which come in their way. For instance, we know of a nuisance in a neighbouring parish, and a dreadful nuisance it is—an open drain beside a highway, the said drain reeking with sewage, and without fall to clear itself. This is in the area of a small urban district, and the farmer on whose frontage the drain is does not like the expense of cleansing it, which the Urban Council forces upon him because the ditch is upon his land. He keeps on cleaning out the ditch very unwillingly, and leaves the material removed to be carted away by the first comer. We will not enter into the question of responsibility for cleansing such a drain; but surely no sanitary authority has a right to use a wayside ditch as a settling tank and saddle the occupier of the adjoining field with the responsibility for keeping it cleaned out. But we are concerned as to the ineptitude of a tenant to take advantage of opportunity afforded him.

A tenant in the position we have sketched might have the manurial value of the sewage of the parish at his disposal, and be paid for disposing of it; and if we brand such a man with the badge of thriftlessness, what must we say of those thousands of farmers who allow the liquid manure from their yards to pass down the parish drains and aid in the contamination of our watercourses and rivers?

The urine of the horse is far more valuable than its dung, but we take great, and we might say misapplied, care of the latter, whilst the former is swilled out as a nuisance rather than as a valuable asset. The true value of peat moss dust in preventing waste of this description has yet to be demonstrated. If this material were used generally in the gutters of cow-houses and stables it would absorb the urine and with it the large proportion of ammonia which it contains, and this, instead of being wasted, or practically so, could be applied by the medium of the peat moss dust to the land, which every day becomes in greater need of it.

Our rivers are polluted every day with matter which would be invaluable to the land. We import immense quantities of Wheat, flour, and feeding stuffs from abroad. If the net manurial value of these articles were not wasted the land of Great Britain should be growing more fertile every day; but the agricultural returns and the "Times" reports do not say so. On the contrary, they show that large quantities of artificial manures are purchased to make up deficiencies by waste of natural manure. It is ammonia we lose, and if we paid more attention to the saving of the ammonia contained in the urine of our horses and other stock we should have less need to spend money in the purchase of sulphate of ammonia and nitrate of soda.

### Work on the Home Farm.

As is often the case after wet and late harvests, there are frequent cases of dispute as to the proper delivery and dressing of Wheat and Barley, and as long as farmers will persist in weighing up their corn from the machine tail such disputes will prevail. As the land varies so does the sample, and to get a satisfactory sample to sell by, portions from the different parts of the field must be well mixed and dressed, and a sample taken from the mixture. Then if the whole bulk is well turned over, mixed, and then dressed, the sample should be representative of the bulk, and no occasion for a dispute can occur. It is wise policy for a farmer to keep a sealed duplicate of each sample he

offers. A factor may buy a sample slightly out of condition, and if he does not sell it for a week or ten days it may very easily, by constant showing and handling, become fairly dry before a re-sale takes place. His customer buys what he considers a dry sample, and naturally objects to have the bulk delivered to him out of condition, and the fault is saddled upon the grower, who generally has to submit to a reduction of the agreed price. This is one more of the penalties for being made use of by the middleman. If farmers were determined always to sell direct to millers or maltsters they would always be able to deliver their stuff immediately, and cases like the above would not occur.

We got the cultivator through the Wheat stubbles, but pressure of other work has prevented anything like clearing, even had the weather been favourable, and with Mangold storing to do and some Potatoes to sort for market we shall hardly get our fallows dressed now; fortunately they are particularly clean, and will not suffer from the neglect. We shall not be able to plough them down much before December.

No Wheat drilled yet! It has been too wet to drill the Clover ley, and the Potato land is not ploughed yet. Many Potatoes still remain in the ground, which is becoming very soft and muddy, and very disagreeable to work amongst. There is a rather healthy demand for good users at 55s. to 60s. per ton, and the smaller growers are selling and delivering as they lift them. This makes the labour difficulties worse, and threshing is frequently prevented by lack of hands.

There has been a strike of Irish Potato pickers. We mentioned a month ago the excellent effect spraying had on a field belonging to a neighbour. This field caused the strike, the crop being so great that the men could only earn half the wages earned by men working on other farms. The strike is settled by the promise of a bonus, but the men are not quite satisfied yet.

## Irrigation in Australia.

The work of extending irrigation in the highland regions of inner New South Wales and Queensland is going steadily on. Wherever artesian wells are yielding a large supply of water there are to-day fertile oases amid the deserts of unproductive land. There is one peculiarity about irrigation in Australia: very little of it is derived from running streams, and irrigation improvements are, therefore, very different, for example, from those in Egypt and California. The reason why the rivers are not very useful for irrigation is that the tributaries lose all, or a great deal, of their water by evaporation or percolation before they reach the main streams. The result is that the Darling, Murray, and other important rivers contain so little water during the summer and autumn months that it cannot be used to flood irrigation channels.

We should never have heard of irrigation in Australia if it had not been for a most interesting discovery. It was found that the water which disappears from the many mountain regions is not by any means all lost through evaporation. A great deal of it sinks through permeable strata of the rock, and collects deep under the ground in artesian reservoirs. It needs only to be brought to the surface to cover many areas with fertility. When it was found that a large part of the dry regions of Australia have immense resources in underground waters, the people began to sink artesian wells. The work began in 1881, and is to-day being pushed more vigorously than ever. The greatest centre of artesian wells is a vast region in Queensland, north of the sources of the Darling River. Along a line which extends north, north-west, south, and south-west, in the form of a half-circle, are over 360 wells, ranging in depth from 100ft to over 3,000ft. The quantity of water from these wells is variable, the majority of them yielding at least 100,000 gallons each every day. Some of them yield one, three, and four million gallons a day. There are many wells in other parts of Queensland.

In New South Wales the wells are much fewer in number, though there are several important centres, particularly at Bourke and Winton, where hundreds of thousands of sheep and cattle obtain their water supply from these artesian wells. In Victoria, South Australia, and West Australia, the boring of wells has scarcely yet begun on an important scale, though in the past two or three years water has been obtained in copious supply at a number of points. But in Australia there is nothing like the large areas of land restored to fertility that may be observed throughout Southern California. In fact, the artesian waters are used more to supply the millions of sheep and cattle with the drink they must have, or perish, than to spread over the grain fields and fruit farms. It remains to be proven whether vast areas of the continent may be reclaimed for farm crops by filling irrigation ditches with artesian supplies. At any rate, the boring of these wells has opened enormous areas of the interior high lands that were formerly useless to the successful pursuit of stock raising.

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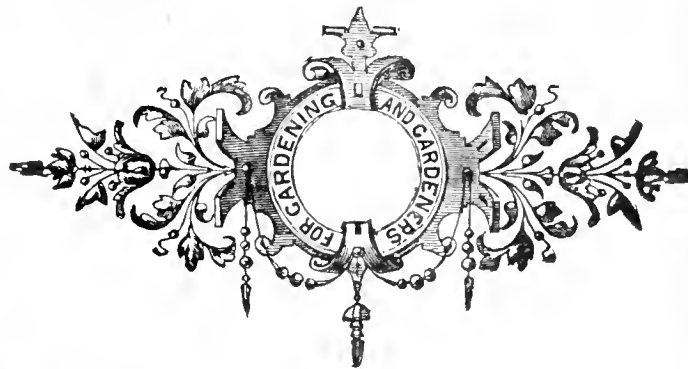
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## Journal of Horticulture.

THURSDAY, NOVEMBER 6, 1902.

### How Orchards are Formed.



F anyone has doubts about the future of hardy fruit culture in this country he may have them dispelled by looking round and observing the young orchards and plantations that are springing up on almost every side. I do not mean to say that they will be found everywhere, for in some counties scarcely any movement is being made, but I do not take this as being a bad sign, because fruit culture is, and must be, confined to certain localities. I have no patience with that incessant cry of plant, plant, plant, irrespective of soil and situation, and people know better than to believe that the growing of fruit necessarily means riches. We do not want the whole country to be turned into a vast orchard, it would not be possible if we did, but it is on the extended planting in districts naturally adapted for fruit culture that the future of this important industry depends.

Because an Apple or Plum tree does well in a certain place it does not follow that another branch of cultivation should be done away with in order to grow fruit on an extensive scale. We might as well try to upset the whole system of agriculture, because, broadly speaking, fruit may be included in this branch. Some people in Kent, for instance, keep cows, but it would be useless to go in for dairy farming such as it is practised in the Midlands and elsewhere; and it is the same the country over. Nature has settled the question by rendering one part of the country suitable for dairying, another for grazing, a third for sheep, a fourth for fruit, and so on. There is no need for any revolutionary methods, but let everything be done in each district to improve the cult of whatever particular crop or agricultural industry that locality may be naturally adapted for.

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.



I am writing from Kent, than which there is no county in England better suited for growing a variety of fruit, and in none, perhaps, are better methods practised by market growers, in spite of the fact that everything is not as it should be even here. When journeying through the Cherry-growing districts I observe young orchards being planted year by year and coming into bearing. If this were not so, what becomes of the thousands of trees that are annually sent out from our leading nurseries? In other parts where the Apple is pre-eminent—notably in the Weald of Kent—there is the same display of young orchards; and fruits which are necessarily of shorter duration, such as Gooseberries, Currants, Raspberries, and Strawberries, come and go, but in its season the operation of planting is ever going on, and the total area of land under fruit is steadily increasing. You hear the Kentish farmer talk hopelessly of corn-growing, and he has grave doubts about the ultimate profits of Hop-culture, but in spite of the fact that he has seasons of dearth and seasons of glut, he says little about his fruit that is uncomplimentary, and steadily goes on planting.

In the case of our hardy fruits—Apples in particular—we are apt to saddle a good deal of unmerited blame on past generations of planters. We talk of the plethora of worthless varieties still in cultivation, as though their unwelcome presence were the fault of our forefathers, but we haven't the heart to do away with them. But we owe something to our predecessors all the same, for who is there who has a giant matured tree, or an orchard of them for the matter of that, of Blenheim Orange, Wellington, or some other good old Apple, who has not reason to bless the hand that planted them? But this, as Kipling would say, is another story, and it teaches us to be fair in our criticisms of what has been done. We should remember that in the past decade high-class varieties were not so numerous as they are now: a nation at home was not clamouring for first-rate fruit, neither were there other nations over the water thirsting to supply it. The Apples of our grandfathers were good enough for their needs, but times have changed, and if the poor seedling and non-descriptive varieties that are still produced on trees that have long survived the planters, are not good enough for present demands, there is a remedy—they can be done away with; but the cutting down of an Apple tree, be it ever so unworthy, if it still bears fruit, is too much for the courage of many a fruit grower.

At this season of the year, when fruit growers, private and commercial, are making their plans for planting, the moment is opportune for a word on methods, particularly as regards orchard trees. The man who plants a permanent orchard is doing something for posterity, and he should realise the responsibility of this. The next generation reaps the full benefit of his wisdom, and it also suffers through his mistakes. I can give an instance of this. A friend of mine recently purchased a couple of orchards, one planted with Blenheim Orange and the other with another variety. About the selection no fault could be found, and the trees were in a full state of bearing, but the Blenheims though they were planted at orthodox distances apart, had, through their spreading habit of growth, become overcrowded, and my friend was in the dilemma of leaving them to spoil each other or cut away a lot of valuable fruiting wood. The Apples in the other orchard were of an upright and less vigorous habit of growth, and though planted at the same time there was a waste of space between them. You see the point perhaps, if the two varieties had been planted in alternate rows they would have filled the space without any overcrowding, and just as much or more fruit would have been obtained, without the painful necessity of hacking healthy trees about just when they were in a splendid state of bearing.

Considering the number of standard trees that have been sent out from nurseries during recent years, one might think that there was no need for further propagation; but, bless you, they don't all grow. I wonder how much money is annually wasted through planting inferior specimens, and sticking trees into grass land, irrespective of suitability, and taking little or no notice of them afterwards. In the planting of permanent orchards, a useful lesson or two might easily be learned from some of our Kentish growers. I could point out some notable examples to my readers, instances in which there are no haphazard methods, but where the thing is done on practical lines and with a purpose.

To begin with, the proper place to make a permanent orchard is not a pasture, but a ploughed field. The trees

make an infinitely better start in ground that is under cultivation for the first few years, and perhaps no finer examples of young Apples could be seen than those planted in Hop gardens in Kent. After a few years the Hops are grubbed, the ground is laid down to grass, and an orchard is established that remains profitable for more than a lifetime. I am aware, however, that it is not always feasible to plant on cultivated land, and when trees are planted in pasture no grass should be allowed to grow round the stem for the first few years.

In the case of standards, let us do away once and for all with the anxiety to get fruit before we have got a tree. The latter should be the first consideration, fruit will be sure to follow, and in the pruning and general management the idea should be to lay a sound foundation of bone and muscle, so to speak, and there will be no doubt about the resources of the tree in the future. And again, plant good specimens. There is no economy in a cheap Apple tree if it is a poor one, and many notable failures and monetary losses may be traced directly to the mistaken policy of buying at the presumably cheapest market.

When planting an orchard I have little sympathy with planting trees twice as thickly as they should be, with the idea of removing every alternate one when they get crowded. Nine times out of ten they never get removed at all, and the orchard is spoiled; and even if they are, you are put to the painful necessity of destroying trees just when they have arrived at a state of bearing. It is far better to make whatever sacrifice of space that may be necessary at the outset with the sole object of establishing an orchard that will be a credit to the planter and a source of profit to himself and his successors.

Lastly, let me advise everyone to plant good varieties. I need not mention them, for they have been drummed into our ears till they are household words. Their name is legion, but the planter may count on his fingers the sorts most suitable for a permanent orchard, and the way in which this Apple, or that acquires itself in the locality should also be a guide in making a selection. Above all things, let the planter of a permanent orchard remember that he is not planting for to-day, nor to-morrow, but for years hence; and if he works on sound, practical principles he will benefit himself, and his successors will bless him in their day.—G.

#### Stem Vascular System of Certain Dicotyledons.

Mr. Worsdell, in a paper on this subject before the British Association, said his object was to show, from anatomical data, that no hard-and-fast line existed between the two classes of dicotyledons and monocotyledons. The hollow vascular cylinder of the stem of a great number of dicotyledonous orders, if not of all, had been derived from a system of scattered bundles such as was characteristic of the stem of almost all monocotyledons. The flowering-stem and peduncle, as being those parts of the caulome which had undergone least modification owing to the necessities of adaptation to external conditions, exhibited, as a rule, most clearly the primitive structure which in the vegetative parts had become obscured. The axial organs of the seedling, owing to their limited diameter and the small number of leaf-traces concerned in the building-up of the vascular system, could not as a rule possibly exhibit primitive scattered arrangement of the bundles. As the stem increased in height and became more woody, and the leaves smaller and more numerous, the scattered arrangement of bundles in the stem (chiefly a result of the latter being mainly built up of large leaf-bases from which great numbers of pluriseriate bundles entered the axis) gradually became modified into that of a hollow cylinder, which was necessary both to support the bending strains from a tall stem and to facilitate the continuous centrifugal addition of new conducting tissues by means of a secondary meristem. The stems of plants possessing scattered bundles supported bending strains by means of a sub-peripheral sclerotic band, and, in those cases where a secondary meristem was present, increased their conducting tissue by the continuous centrifugal formation of new scattered bundles accompanied by interfascicular tissue. As far as the investigation had gone, the primitive scattered arrangement of bundles could be traced in the stem of about thirty dicotyledonous orders, and no doubt many more would reveal it. In some monocotyledons the scattered bundles had become very peripheral, and even reduced to a single series or row of bundles. In some cases amongst dicotyledons where the scattered arrangement had vanished from the stem it could still be found in the less modified foliage-leaf, especially where the petiole was cylindrical in contour or possessed a considerable diameter. In view of the above facts the author cannot agree with those writers who maintained that the vascular structure of the seedling stem of dicotyledons generally proved it to be primitively tubular in dicotyledons generally proved it to be primitively tubular.



***Odontoglossum crispum*-Harryanum var. *delicata*.**

The flowers are large, with pale coloured segments, white at the base and heavily spotted with chocolate colour; the lip is large and white tipped, also speckled and marked with brown, and has a yellow blotch on the claw. A First Class Certificate was accorded to this novelty when Baron Sir Henry Schröder, The Dell, Egham, staged a plant bearing six flowers, at the meeting of the Royal Horticultural Society on October 20.

**The Week's Cultural Notes.**

In preparing Orchids for their winter's rest the mistake of drying them off too quickly is often made. To properly withstand the drying process necessary to their culture pseudo-bulbous Orchids have to store up plenty of nutriment, and the drying must come afterwards. As long as the roots, then, are sufficiently

active to take up moisture the moisture must be supplied. Naturally the water supply will be limited now, because the atmospheric conditions now obtaining are not conducive to a rapid drying. Nor are the roots active enough to take a full supply, but to dry the plants altogether directly growth ceases means depriving the pseudo-bulbs of a certain amount of stamina that they will need later.

It is far better to over-water a little now and keep the plants drier in spring, as the plants are hard now, whereas in spring there are tender young growths that damp off easily with any excess of moisture. And in plants that shrivel badly in winter the young growths that do start are weakly to begin with, while those from stout plump bulbs are strong and well able to take care of themselves. The shrinkage often noted in pseudo-bulbous Orchids in winter may to a great extent be lessened by attention to their wants now.

Distichous-leaved kinds, on the other hand, like *Phalænopsis*, *Aërides*, *Saccolabium*, and *Vandas* are taking very little moisture now. If the plants are examined the late growing points of the roots will, in the majority of cases, be found to have clouded over.

There is not the same soft spongy appearance there was a month or so ago. This indicates a desire to rest on the part of the plants, and beyond an occasional moistening to prevent the leaves becoming soft and shrivelled, water will do more harm than good.

Especially is this the case with regard to the Moth Orchids. Roots and leaves are exceptionally sensitive, and both are now able to draw from the atmosphere nearly all the moisture they require. The leaves in particular should not have a drop of water near them now, as it runs down to the junction of stem and leaf and rots the latter at the axil. The larger growing members of this section, such as *Vandas* of the tricolor and *suavis* group, large *Angræcums* like *A. eburneum* and *A. sesquipedale*, *Aërides odoratum* and similar subjects, are not so particular. Their roots are stronger, and the nature of the leaf is more adapted to throwing off moisture, but even here only enough to keep them plump and in good condition need be given.—H. R. R.

## Crocus hyemalis.

Less useful in the garden than many of its congeners, the winter-flowering *Crocus hyemalis* may be said to be emphatically a flower for the *Crocus* lover who is prepared to devote a little extra care to secure its flowers. This is due to their appearance in midwinter, a time when we have not only stormy weather as a rule, but also short days with only a brief spell of sunshine.

The former evil may be remedied by the aid of a glass or hand-light over the flowers, but the latter cannot be overcome in our climate. On the other hand, the flowers last longer than if they had daily sunshine, always provided that they are properly protected. Thus such a *Crocus* as *C. hyemalis* is also one for the amateur with an unheated or cool greenhouse or frame, as the corms may be potted, though they must be kept out of the reach of mice, which are serious enemies to the *Crocus* where they are rife. In light, sandy soil it will do well, and, while some recommend shallower planting, I should not think of keeping the tops of the corms less than an inch beneath the surface, and I should prefer a depth of two inches when cultivated in the open ground.

*Crocus hyemalis* is in itself a pleasing although not a showy species, its claims upon our notice lying mainly in its time of blooming and in the quiet and simple beauty of its delicate flowers. Its floral segments are thin in substance, which makes the glass covering in winter all the more necessary. They are yellow at the throat and are white, veined with purple lines towards the base. The handsome variety *Foxi* has, according to Mr. Maw, the outer segments "freckled and suffused with purple," but this is not invariably the case, and individual flowers have frequently the same exterior colouring as the type. The anthers, filaments, and style are all orange, except in the variety *Foxi*, which has black anthers, a feature which adds greatly to the beauty of this form. The flowers are of medium size, and are very pretty and attractive when open in the sun.

*Crocus hyemalis* has only a limited range in its native habitats, this being confined to Palestine and the Syrian border, and the variety *Foxi* was sent originally from near Jericho.

It appears rather remarkable that the typical *C. hyemalis* is but rarely found in cultivation, while the variety *Foxi* is the one usually obtained if *C. hyemalis* is ordered. I have had it from several sources, both here and on the Continent, and always

with the same result—that *Foxi* was sent. I have, however, this autumn an importation from the north of Asia, and hope that this may turn out the typical form, although the other is perhaps the more distinct and attractive of the two.—S. ARNOTT.

### Transplanting the Pæony.

In nursery catalogues the advice is sometimes given to transplant the Pæony in autumn in preference to spring; and this is very good advice, if one wants flowers. Taken up in the usual way in spring and reset, the plants seldom bloom until the following year. The Pæony starts to grow very early in spring, and this and the loss of some roots in digging check it so much that it rarely flowers as it would have done if undisturbed. If of flowering age, and but little disturbed in the operation, fall planting will not hinder its blooming.



***Odontoglossum crispum*-Harryanum var. *delicata*.**





#### Ryecroft Nursery, Lewisham.

At this nursery Mr. H. J. Jones has an excellent stock of plants this season, better than he has had for years. The flowers most in evidence, and which impressed themselves most favourably, were George Lawrence and Mrs. Harry Emmerton. As seen at Ryecroft, these are perfect. Without describing them at this point, I should like to dot down a few other names of novelties, each of them especially good, as follows: Miss Elsie Fulton, which name is on everybody's lips in the Chrysanthemum world, and yet it is only—but there. Then General Buller (the flower) is as bronzy as the battle-warrior; W. R. Church is good everywhere this season; Madame Paola Radaelli is a mass of beautiful pink and white, the petals broad; O. V. Douglas, the "butter-and-eggs" mixture, will take on because of its soft yellow colour and size; Matthew Smith is intensely rich in hue; Nellie Bean—a new edition of the charming Emily Towers; Bessie Godfrey, which, with Sensation, were perhaps the best of the Exmouth novelties last year, are A1 at Lewisham; while no one can pass by Mrs. Greenfield, the finest thing in deep yellows, or Mrs. Alex. McKinley, which has already drawn forth praises in other quarters. To conclude with, in this select list must be named the gigantic Ben Wells, the superb Lily Mountford, the beautiful yellow Earl of Arran, and, lastly, Master C. Seymour, all of which well deserve a prominent place in collections.

From what I have seen of the shows thus early, there are many exhibitors who do not fortify themselves with the year's novelties, as evidenced by the stands staged by them, and much of the charm of attending the shows is thus lost to those who, like myself, follow the careers of the new varieties from year to year, and find a charm in observing their behaviour under the different meteorological conditions peculiar to each season.

General Buller is a handsome bronzy amber, but rather apt to damp, if one may judge from Mr. Jones' plants. It is one of the largest of the incurving Japs. Miss Elsie Fulton, lately certificated, is certainly a beautiful and somewhat incurving Japanese, of snowy whiteness, but it is very much like two others that might be named. Mrs. J. C. Neville is another large white. Mrs. Harry Emmerton (Bunning) has proved to be a large flower, with smooth, drooping, flat florets, of a deep canary yellow. Henry Stowe furnishes a pure mauve-pink flower, after the Vivian Morel type; Geo. Lawrence, already noted, is spoken of as an amateur's flower, coming well on any bud, but crowns preferably. It is certainly one of the largest and finest Chrysanthemums of this season, and was raised by Mr. Perkins, whose foreman's name it bears. The florets are broad and smooth, bronzy-buff above and red inside.

Nellie Bean is also a large bloom, which, the earlier one gets it, the paler in colour it is, but shades off with age to Emily Towers colour. It is a very fine novelty. Bessie Godfrey is producing massive flowers on quite small plants, in 6in pots. Decidedly it is one of Mr. Godfrey's best, and at Ryecroft it is held in high esteem, where they describe it as "an improved Von André." The centre is of a much deeper yellow than the pale sulphury tips seen in a fully developed flower. One must always find a line of praise for the peerless Miss Alice Byron, whose huge blooms on single-stemmed plants, only 2ft high, and in 5in and 6in pots, were really a sight to marvel at. In passing, one may note a representative of Mr. Jones' Giant Incurved section, namely, W. Neville, which resembles the Baron Hirsch variety in colour. The flower is very regular, large, firm, and well coloured. H. E. Hayman resembles Sensation—intense yellow with crimson flushing. Another easy doer and good sort is found in C. Penford, an improvement on Mrs. J. W. Barks, which it far and away excels in colour. It comes well on any bud.

Earl of Arran deserves more than the passing notice already accorded. It is excellent after this damp season, just as it was a year ago when the weather conditions were different. The flowers are large, canary yellow in colour, and are slightly incurving. Then there are all the Exmouth seedlings here, to wit, Godfrey's Masterpiece, Queen Alexandra, Godfrey's Pride (well spoken of), Godfrey's King, and Godfrey's Triumph, but many of the plants have failed to produce flowers of the requisite size. The foregoing notes mention only a very few of the many choice varieties at Ryecroft, but growers find it quite enough to keep up with all the new comers. Mr. Jones has some excellent new representatives to offer during the coming season, including Miss Mildred Ware, H. Perkins, and Miss Edith Smith.—VIATOR.

#### Manipulating the Petals.

I have been prompted to write a few lines upon the subject of manipulating the petals of Chrysanthemums, especially the Japanese varieties, by a letter recently received from a prominent exhibitor, who asks if I agree with the reflexing of the blooms of Japanese varieties? He goes on to say:—

"I know some kinds are improved in appearance by having their petals turned, and yet, on the other hand, a good many blooms were shown last November entirely out of character."

For the last few seasons I have heard many comments made at shows by visitors and exhibitors, some for and others against the practice. As the subject opens up a moot point, I thought it might be of interest at this season to those interested in exhibition Chrysanthemums. At the outset I would say I am a believer in an exhibitor making the most of his blooms by all lawful means at his disposal. For instance, a variety like Pride of Madford, for example, which has at times a tendency to display florets of an incurved nature might be made all the better in appearance if such florets were reflexed, displaying that rich amaranth colouring that this variety possesses on the upper surface of its florets. I am fully alive to the fact that such an expression of opinion will not meet with universal approval, especially from non-exhibitors, who do not always realise the various points of advantage gained by displaying every bloom to its fullest extent.

My argument in favour of such a proposal is, I think, a strong one. Is there any authority who will say definitely which varieties belong strictly to the reflexed and incurved Japanese section? He, indeed, would be a bold man who would say so. Even in the case of the variety quoted, and which, I believe, receives more manipulation of its florets than any other, is not definitely described by the central authority—the N.C.S.—in their classification catalogue. Quoting from the published description, I find it reads thus: "Large bloom, outer petals recurving, centre incurving." No one will say there is any finality in this, and, therefore, little argument against the practice of manipulating the florets to obtain the finest display of colour. Mrs. Barkley is another popular variety which is subject to much comment, as well as manipulation of its florets.

In producing Japanese blooms of the finest quality it is surprising what culture does towards the display. With some exhibitors, and in particular localities, blooms of both varieties named will be produced in a natural manner, with not a single petal betraying a tendency to incurve, but all displaying the rich amaranth of the one variety and the intense rosy pink of the other. In Edinburgh the exception is to see a bloom of Mrs. Barkley with incurving florets; naturally, the blooms are built up with florets of a reflexed character. Presuming, then, that Mrs. Barkley and Pride of Madford are said to belong to the incurving Japanese section, would it be fair to judge such blooms as are naturally produced in a reflexed manner at a low standard because they do not conform to the ideal of some few persons?

A grave injustice would presumably be done to such an exhibitor. Those who are conversant with the culture of Japanese Chrysanthemums know quite well that it is purely a question of bud selection whether the blooms will be of the desired form or not. I do not agree, though, with clumsy manipulation of the florets. If a bloom is to be presented in an improved form by reflexing artificially its florets here and there an obstinate petal, surely an improvement is effected. Must a bunch of Grapes be staged with here and there a small berry being exposed because they grew naturally? What is right in one exhibit cannot be wrong in another. What is your remedy, then, for clumsiness? I hear someone ask. A loss of points, of course, must follow.

In conclusion, I would say an exhibitor is justified in presenting his blooms in the best possible manner, providing it is lawfully done. There cannot be such a thing as disobeying a rule which has no definition.

In the case of incurved blooms, it is more often a question of incurving them than the opposite. In this section culture is wholly responsible for such defects as reflexing florets. Here we have a definite aim and an ideal. Manipulation is more in the way of arranging the florets than of converting them; more often they require thinning than anything else. Those who hope to win prizes with incurved Chrysanthemums must manipulate the florets in some form or other.—E. MOLYNEUX.

#### Treatment of Chrysanthemum Henry Barnes.

This is perhaps the tallest or most lanky-growing Japanese Chrysanthemum at present in cultivation. A good method to follow is that adopted this year by Mr. Wells at Earlswood, whose plants have been pegged down and trained horizontally. Only about 1ft at the apex is allowed to grow vertically, and the flower opens splendidly, while the plant takes up but little useful space, being placed at the back part of a stage close under the sloping roof of the house.—J.

**English Flowers for the United States.**

On Saturday, October 25, Mr. W. Wells, of the Earlswood Nurseries, Redhill, Surrey, despatched from a dozen to twenty of his finest flowers to an agent of his in New York City, N.Y., per the s.s. Campania. These were sent on trial, first, to see how the blooms travelled, and, second, in order that they might be compared with other flowers at an exhibition where they were subsequently to be staged. It will be interesting to learn what was the opinion of the Americans who saw these flowers.—H.

**Chrysanthemums in Oxfordshire.**

On Friday last, being in the vicinity of Burcote, and having a short time at my disposal, I decided to visit the gardens at The Croft (the residence of J. Randall-Higgins, Esq.), with a special object of seeing the Chrysanthemums, which are always grown well in the hands of Mr. Morris, who is a most capable and energetic gardener: with another essential quality, to win the respect of lovers of gardening, and that is desirability to make your visit pleasant and instructive. A great deal could be written about these large and well-kept gardens which would stimulate many a gardener to renewed energies, and to go and do likewise; but on this occasion I was going "a Mumming," and of the 'Mums I will write.

On entering the first compartment of a newly-erected range of lean-to houses I found a grand batch of bush plants, to supply cut bloom for decorative purposes. Passing through another house I found in the third compartment a grand display of blooms in variety on healthy and vigorous plants, which were effectively arranged. Miss Elsie Fulton, with blooms 9in deep; Graphic, with blooms 12in in diameter; and so on in like manner were many of the blooms of the following varieties: Mons. L. Remy, Mrs. G. W. Palmer, Mr. T. Carrington, Lord Ludlow, Calvat's Sun, Mrs. Coombes, Mrs. White-Popham, Kimberley, Emily Towers, Duke of Wellington, Rev. W. Wilks, Phœbus, Dora Herxheimer, Mrs. W. Cursham, Miss A. Byron, Mutual Friend, and Mrs. G. Mileham. The best of the incurred varieties were Mrs. H. J. Jones, Mrs. R. C. Kingston, C. H. Curtis, Louisa Giles, Mme. Ferlat, Baron Hirsch, Matthew Russell, Globe d'Or, Yvonne Desblanc, and King of the Yellows. Three large houses are required for housing the hundreds of plants grown by Mr. Morris.—S. HEATON.

**Choice Michaelmas Daisies.**

Perennial Asters increase so much in variety that it is absolutely necessary to reorganise the lists annually if the newer kinds are to be added and the collection kept within a reasonable limit. During the last four years many very fine kinds have been added; indeed, almost a revolution has taken place in the habit of growth, formation, and colour of the flower. Thanks to enthusiastic workers in raising new varieties, notably Mr. E. Beckett, Aldenham House Gardens, who has received within the short space of three years eleven Awards of Merit from the Floral Committee of the R.H.S. for varieties of his raising.

The manifest improvement so apparent in the present-day varieties is in the habit of growth; instead of the stiff, erect style, we have now varieties which grow tall, yet graceful in appearance, as they send out side branches from the main stem from close to the ground, these in turn being pendulous and not too thickly placed, giving the plants freedom and blossom in abundance. Given ample space, a magnificent effect can be produced at this season of the year with these plants. To see the beauty and compare varieties, Michaelmas Daisies should be grown in a batch by themselves. Where so many persons make a mistake in culture is by allowing the stools to remain too long on one site, or at least not replanting often enough. For the largest specimens three shoots at the base will suffice. If more are allowed to remain, the growth is weakly and crowded; indeed, I like to replant every year, and if one stout sucker is selected, the plant liberally treated to manure, handsome specimens are easily obtained. As the present is the most suitable time to make new or replant borders, I thought a descriptive list of varieties would be a help to beginners.

For the guidance of planters I give the approximate height of growth. Hon. Edith Gibbs is a seedling from *Ericoides elegans* crossed with R. Parker; colour, pale blue, densely flowered, drooping habit; October, 6ft. Triumph was raised from Coombe Fishacre, growing 5ft high, and flowering abundantly. The blooms are large, pale lilac in

the centre, deepening to rose at the edge, very free and graceful; October. Esther is a cross from Pleiad, of upright growth, 3ft high, densely flowered, lilac or deep pink, distinct and showy; October. Enchantress, 5ft, drooping habit, free and graceful, almost white in colour.

Gloriosa is striking in colour, when unfolding it is white, changing to lilac and then to deep purple with age; the growth is erect, from 2 to 3ft high, very free. Edwin Beckett is a seedling from Cordifolius, having all the free-flowering, graceful habit of growth of its parent, in colour it is bright blue; 4ft.

Ideal is from the same source, with quite small blossoms, pale blue; this is quite one of the most elegant growing varieties we have. Captivation, 3ft, lilac blue, free. Fascination, 3ft, blue; the leaves are small, the cup-shaped flowers have widely set apart florets.

Minnie is one of the most charming varieties yet raised. The colour is lilac, changing with age to a deep rosy shade of the same tint; 2 to 3ft. Grace Darling is an offspring from Coombe Fishacre, having larger flowers than its parent, equally free in production. Hon. Vicary Gibbs, bright pink, upright growth, flowering abundantly from the ground. Admiration has medium sized flowers, of a purple lilac tint colour, excellent; 3ft.

Novi Belgii supplies many desirable varieties of which the following are some of the best. Densus, lilac blue, 3ft; Ella, 6ft, delicate mauve, a charming free flowered variety, with large blooms; Mrs. John Wood, 5ft, free, erect growth, pure white with a yellow disc; Top Sawyer, 6ft, is an improved form of Robert Parker; Esme, 2ft, large blooms, pure white; Mildred, 4ft, soft blue, large blooms, free, a vigorous spreading habit of growth; Margaret Matthews, erect growth, 5ft, very free, flowers simultaneously, pure white, changing with age to purple lilac; Pluto, 4ft, erect, free, round shapely blooms, metallic blue; Nancy, large pale blue flowers 5ft, free; T. S. Ware, 4ft, rosy lilac blue, a distinct colour; W. Marshall, 5ft, pale blue, large and free.

The Cordifolius type are the general favourites, being free flowering, especially showy in a cut state, the colour, soft mauve, predominates in all the varieties. Major has the larger blooms than the type, Albulus smaller, all 4ft high.

*Ericoides* has Heath-like foliage and long graceful sprays of pure white flowers, which for cutting are much appreciated; all varieties of this type grow into charming specimens if given space to develop fully. Elegans is, perhaps, less stiff in growth than the type; Clio has blush white flowers; Acris is a variety quite by itself in habit of growth and colour, growing 3ft high, forming a full rounded head of bloom, lilac purple; Shorti, 4ft, has long graceful sprays smothered with small bright lilac flowers; Paniculatus, W. J. Grant, 4ft, blush white florets, rosy lilac centre, very showy; Chapmani, 4ft, an erect stem with horizontal side shoots, very distinct and free, pale blue.

Puniceus pulcherrimus, 5ft, silvery grey large flowers, with deep yellow centre; Diffusus is an excellent late-flowered variety, with pure white small blossoms, October and November, 5ft; D. horizontalis, syn. Datchi, 3ft, is one of the most striking of Michaelmas Daisies, the small blooms have pure white florets with a deep red disc.

Tradescanti, 4ft, does not open its blossoms until the end of October or November, the foliage is small, and the flowers white; it is excellent for pot culture late in autumn. Turbinellus has large violet-coloured flowers tipped with rose, remaining long in beauty, 3ft.

The Novæ-Angliæ section supply a nice variety of colour late in autumn. Mrs. J. F. Raynor is distinctly showy, rosy crimson, 5ft; Rubra runs it close in colour and is later in opening its flowers; W. Bowman, purple blue, with an orange disc, is an improvement on pulchellus, 5ft.

Amellus supplies useful variety, all being of dwarf habit 1ft to 3ft, carrying large flowers with a prominent yellow centre; Framfieldi is, perhaps, the best of all, it is stiff yet spreading in habit with deep blue flowers which last long in condition either when cut or as growing; Riverslea is perhaps deeper in colour—rich violet blue—than any; Bessarabicus, lilac-blue, is the more robust and free flowering of any of the section; Roseus, as its name implies, is rose tinted.

R. Parker nanus I had almost forgotten; it is worthy a place in any collection. It is simply a dwarf—2½ft—form of the type, in this way useful for the front of taller kinds or in the herbaceous border itself.—E. MOLYNEUX.



## Notes from Chiswick Garden.

When recently walking round the Chiswick Gardens of the Royal Horticultural Society with the superintendent, Mr. S. T. Wright, I questioned him as to his idea of the best Pears for suburban gardens. He said that while the Apple crop in the gardens had been a slight one, that of Pears was better, and he instanced Louise Bonne of Jersey as the best cropper this season, and as one of the very best Pears for suburban gardens, as it is a certain cropper. The earliest Pear at Chiswick was Doyenné d'Été, which is ready by the third week in July, and is earlier still from dwarf trees. Mr. George Bunyard says of this Pear that it bears freely on any form of tree, and is best gathered a few days before it is ripe.

This is followed by Citron des Carmes, which comes in immediately after; and following these in the order of ripening come Williams' Bon Chrétien, Souvenir du Congrès, which is short lived on the Quince stock, but which does well on a free stock or double grafted—Beurré d'Amanlis, Fondante d'Automne (a great bearer and of fine quality), Louise Bonne of Jersey (which many think to be the best Pear grown), Beurré Hardy, Doyenné du Comice (which Mr. Wright regards as "The finest Pear on earth"), Thompson's, Glou Morceau, Winter Nelis, Josephine de Malines, and Bergamotte Esperen as one of the latest. All these had proved good bearers during the past season.

Mr. Wright recommends the foregoing as of good constitution and good growers. For suburban gardens he specially mentioned Louise Bonne of Jersey, Marie Louise d'Uccle, Josephine de Malines, and Winter Nelis, and as doing well on any form of tree—bush, pyramid, wall, or espalier. Marie Louise d'Uccle, though not of the highest quality, is valuable as a heavy and regular bearer; it is an excellent variety for market culture, as it crops freely when other Pears fail. These suit the London district, being of healthy and vigorous growth, and they carry on the succession until March.

The best keeping Pears, in Mr. Wright's opinion, are Easter Beurré, which is of fine quality on a warm soil, and will keep till the end of April. Beurré Rance, which, like the foregoing, should be planted in a warm soil; it is a free grower, and needs root-pruning to induce fertility, and prevent the fruit from cracking; the fruit will keep until May. Nouvelle Fulvie, a good January variety; Olivier de Serres, February and March; and Marie Benoist, January and February; it produces large fruit brown on the skin, and is of fine flavour.

The following were mentioned as good keeping Apples: Newton Wonder, which Mr. Wright regards as one of the best Apples in cultivation, keeping well until April, and strongly recommended for orchard or garden. Foster's Seedling, a recent new variety of dessert quality; said by some to have come from a cross between Blenheim and King of Pippins, though considered by Mr. Bunyard to be a local seedling from Cellini, and recommended by him for small gardens. Chatley's Kernel, a dessert variety which keeps until the end of May; in shape flattish-round, brownish-red with russet spots. Pott's Seedling was named as one of the finest Apples to plant in smoky districts; while Golden Spire and Ecklinville Seedling were named as two excellent varieties for market work in the North of England. New Hawthornden, Stirling Castle, and Lane's Prince Albert were named as two fine varieties for suburban gardens. The two best late keepers are Newton Wonder and Lane's Prince Albert.

Of Apples which have done well up to this year Mr. Wright mentioned Allington Pippin, which he regards as extra fine, and will keep until March if the fruit be not gathered too soon; it does well on a light soil, but the best flavour is found in fruit from trees planted in heavy ground. Duke of Devonshire was also named as good enough for dessert purposes; it is a somewhat old Apple which has come into notice of late years. Adam's Pearmain and Allen's Everlasting are both late-keeping dessert varieties. The quality of Apples, said Mr. Wright, has been poor this season. The better varieties of Pears have not cropped so well as usual this season, but the commoner sorts—Beurré Capiaumont, Beurré Diel, and Beurré Clairgeau—have produced heavy crops.

Plums, generally, have yielded only moderate crops; the best bearers have been Monarch, Victoria, Belle de Louvain, culinary varieties, and Gisborne's, which Mr. Wright named as a dessert variety; the Frogmore Prolific Damson had also given a good yield. But the best dessert Plums had borne but scanty crops.

Peaches and Nectarines on walls had been an average crop; the best three outdoor Peaches for suburban gardens were Early York, Acton Scott, and Barrington. Outdoor Nectarines: Oldenburg, Rivers' Orange, and Dryden. Mr. George Bunyard recommends three of the American Peaches as bush trees, viz.: Hale's Early, Waterloo, and Early Alexander. He remarks:—"The situation must be sheltered, and the soil should be calcareous, rather shallow, and abounding in porous stones (which can be added if needed, or broken bricks would answer), and the

trees should be treated like Plums, and only be watered with liquid manure when they carry a crop; the aim of the cultivator being to get the wood well-ripened. Fruit so grown carries a fine colour, and is very rich in flavour."

Plums for walls in suburban gardens are Early Transparent Gage, Transparent Gage, and Late Transparent Gage; Mr. Wright considers the foregoing to be amongst the very best dessert Plums. He also recommends for growing in the open as bush or



*Puschkinia libanotica compacta.*

standard, or against a wall, Reine Claude Comte d'Atthem's Gage, a delicious late dessert kind, which, for the space of seven years has never failed at Chiswick; and this grown in the open as a bush; it had a great crop when the other Gage Plums were a failure. Truly a Plum to be planted in all gardens.—R. DEAN.

*Puschkinia libanotica compacta.*

This small genus of Liliaceæ, according to Baker's monograph, includes only two species—i.e., *P. scilloides* and *P. hyacinthoides*. They are closely allied to Scillas on the one hand and Ornithogalums on the other, the habit and general appearance of the plants coming much nearer the former. *P. scilloides*, under which is included *libanotica*, typical, the variety illustrated in the accompanying drawing, and also *sicula* figured in the "Flore des Serres," is amongst the most welcome of our early spring-flowering bulbs, coming in early in March and lasting until the end of April, a time when flowers are most wanted. *P. libanotica* is not unlike Scilla in habit, about 6 in high, throwing up two or three radical narrow lanceolate leaves, and sheathing the flower stem a third of their length. The flowers are collected in a loose cluster or corymbose head, a little larger and deeper in colour than the ordinary *P. scilloides*. In the variety *compacta* the head is dense, flowers more numerous, and having a more distinct blue-coloured midrib running up each segment. Dotted here and there on the rockery or mixed border, they look very gay during their season, and we hope to see them treated in the same way as the Croci and Daffodils in the woodlands. Like several other bulbs of similar habit the Puschkinias can also be grown in pots with advantage, and if introduced into the conservatory or greenhouse they are useful for arranging in the front of the shelves or stages. When treated in this way they are preferably grown several in a pot, like the Scillas, for otherwise they do not produce so good an effect.—M.

## Botanic Gardens.

(Continued from page 406.)

The Royal Botanic Garden, Edinburgh, is the next largest to that of Kew, established in 1670 as a physic garden, and consisted of a portion of the Royal Garden around Holyrood Palace, and was occupied by two eminent Edinburgh physicians, namely Andrew Balfour and Robert Sibbald. James Sutherland was appointed to the "care of the garden;" it was stocked with plants from the private garden of Dr. Andrew Balfour, who had for years been collecting medicinal plants, and also from the garden at Livingstone, in West Lothian, the Laird of which, Patrick Murray, was much interested in the growing of useful plants. In 1676 the same physicians acquired from the Town Council of Edinburgh a lease of the garden of Trinity Hospital, for the purpose of another physic garden, and appointed the same James Sutherland to be its superintendent also. This was known as the Town's Botanic Garden.

About 1702 (just 200 years ago) another Botanic Garden was established in Edinburgh, close to the College buildings; this was known as the College Garden, this also was placed in charge of James Sutherland. Thus we see that there were three botanic or physic gardens. Sutherland from the first gave instructions to the students of medicine in the Royal Garden, and received a Royal Warrant appointing him botanist to the King in Scotland, and empowering him to set up a profession of botany in this garden. The Town Council also appointed him to lecture on botany in the town's college, now the University of Edinburgh. We learn that there were between two and three thousand plants in cultivation there (jointly in the three gardens it is supposed); these were the foundations of the present Botanic Garden, which at present consists of fifty-seven acres, but the present site is not that of either of those gardens mentioned, for in 1820 a new piece of land was purchased, and by 1823 all the plants had been removed to it.

When Sutherland resigned a portion of his charge, a new curator being appointed, split the gardens as it were; but after about twenty-five years they were reunited under one keeper and regius professor. They have at Edinburgh a good collection of alpine and herbaceous plants, trees and shrubs, and many plant houses for Ferns, Orchids, insectivorous, economic and other interesting groups of plants. The regius keeper (Professor Balfour) from time to time gives lectures in the gardens, which are free to the gardeners. For about fifty years the regius keeper and professor of botany in the university having been held by the same person, it has become the custom that the students of the university to come to the garden for instruction. The gardens are open from 8 a.m. week-days and 11 a.m. on Sundays until sunset. The plant houses are open from 1 p.m. until 5.30, or until sunset if this be earlier. The museum is also open on Sundays. The herbarium from 10 a.m. until 6 p.m. except Saturdays, when this closes at 1 p.m.

### Glasnevin.

The Royal Botanic Garden at Glasnevin, Dublin, consists of about thirty-one acres, and was established about 1798. It was then divided into the Linnean garden for the scientific botanist who studies the plants systematically, the Cattle garden, the Hay garden, the Esculent or Vegetable garden, the Dyers' garden, and Irish garden. It is further stated the professor gives lectures on the Cattle and Hay gardens for the instruction of farmers, their servants and labouring men, all of whom are admitted to the lecture free. Also separate lectures were given in those days for dyers' instruction and for extending practical knowledge. It was provided with money for its maintenance from the Imperial Parliament and the Dublin Royal Society. Dr. Wade was the first professor, and Mr. John Underwood was recommended to the Dublin Royal Society by the late Mr. Curtis, Editor of the "Flora Londoniensis," "Botanical Magazine," &c., as a fit person to conduct the practical part. Mr. Speaker Foster (afterwards Lord Oriel), was the prime mover in its establishment, and continued to take a great interest during his lifetime.

A catalogue of the plants grown in this garden was published in 1801 and 1802; the collection was very large, and there were then five plant houses. We need not here go into all details respecting the history of the garden. In 1833 Mr. (afterwards Dr.) David Moore was appointed

director, and after his death in 1879 was succeeded by his son, Mr. F. W. Moore, the present director. They have at the present time eight large plant houses, herbaceous ground and tree and shrub departments, and also the experimental department, with agricultural plants, oil plants, kitchen garden plants, dyers' plants, grasses, fibre plants, and pot herbs. Then there is the ornamental flower ground department, a lake or water garden, a botanical museum, herbarium, and library.—ALBERT HOSKING.

## Renewal of Old Fruit Trees.

(Concluded from page 407.)

With old Peaches, Nectarines, and Apricots it is far best to destroy them outright and start with young trees. In all good gardens a reserve of young free trees is maintained, so that a gap can be filled at once by a vigorous, healthy subject of three to five years' growth, which itself is all the better for the check it receives in removal.

In the Society's Journal, vol. xxv., p. 363, a wonderful drawing is given of a large trained Pear tree which was so successfully renovated by rooting the lower branches that the main and original stem could be dispensed with. In other words, the tree first had one, then three sources of nutriment, and finally two.

In all cases new soil should be introduced to the roots. Good, sound, turfy loam is better than heavily manured soil; and if stimulant be necessary it is best supplied as a top dressing.

There is yet another way of dealing with old overgrown pyramid trees. After two years of free growth, as before named, the resulting shoots can be tied into a frame, and made to assume a set form; thus treated they fruit freely, and the branches being secured the fruit is not bruised by the winds.

It should be mentioned that where large trees are headed back the new shoots are very strong, and must be duly nailed in or otherwise secured; and if a second lateral growth should be formed from the lower eyes, it should be pinched at the third leaf to encourage fruit buds to form.

Very old Figs often get bare below, and far too crowded at the top of the wall. These should have the large coarse boughs cut away at the base, and the best of the resulting new shoots be nailed into the wall.

It is a great mistake to let Figs carry too much wood, and they more often suffer from over-manuring than the reverse. In fact, where they root into the vegetable borders it is as well to make a trench 2ft wide and 3ft deep, and fill this with broken bricks, porous stone, loam, and old mortar rubbish. The roots revel in this material, and the trees lay up good, hard, sound, fruitful wood.

Though the Grape scarcely comes under notice in this paper, old Vines can be safely cut back, where the precaution of leading up one or two long rods from the base of the cane has been previously taken. But it must be borne in mind in such cases that the borders often get into a bad state, or that the roots go searching for nourishment in positions too far from the surface, so that the wisest economy may be to make entirely new borders and start with fresh Vines.

In a small garden half the vinery should be taken in hand at a time, but where several vineries are in use, one house can be renewed in a season.

All small fruits, such as Gooseberries, Currants, and Raspberries, so soon bear fruit that old unsightly bushes are best destroyed to make room for new ones. It may be as well to say that Strawberries are of but little use after three years, and new beds should be made annually, so as to keep up a regular series.

Where old trees are to be grafted, the stems should be prepared in February and the new grafts be inserted by the end of March. As the shoots swell very rapidly, the junctions of scion and stock must be carefully watched, or the tying material may cut into the new growth, causing it to be a harbour for insects and making it liable to snap off, and so losing a season. The scions should be cut in February and be laid in the ground half their length deep, in a shady place until wanted for use.

\* Paper read on January 23, 1902, by GEORGE BUNYARD, V.M.H., at the meeting of the Royal Horticultural Society.



## A Sore Point.

I want, with your permission, to tell a little story which many a gardener, I am perfectly certain, could match. For good reasons the hero of the story is chosen from the lowest ranks of the profession, and, as a matter of fact, is more generally known in the locality as the "Minister's man" than as a gardener. His duties include the care of a cow, poultry, pony, bicycles, heating the church in winter, and cooling it in summer, running messages, taking charge of the parish when the minister, poor man! has recourse to Aix-les-Bains or to Strathpeffer, or maybe to the links of Macrahamish or St. Andrews. That the charge is no sinecure either, a short conversation we had together one day we foregathered will prove. After mutual greetings he apologised for being unable to return and show me the manse garden. "The minister's away," he exclaimed, "and I'm gaun yont bye to Maister Johnston's aboot a marriage the morn's night, and about twae corps I've lying in the parish; and the coals are coming in the morn!" These and other matters we philosophically endured as evils that must be tholed, and though James is to everybody else a kind of all-round factotum, in his own eyes he is strictly a gardener. He visits all the gardens in the vicinity, and within easy reach, and his holiday would be sadly incomplete if some strange garden were not inspected before its conclusion. His reports of these inspections are marked by exceeding terseness, and though hardly fit for the horticultural Press, to those acquainted with his definitions they are charmingly complete. If the garden honoured by a visit is described as "no bad, but a wheen weeds about," we gather that things generally are scarcely satisfactory. "A fine place yon, but I've seen maybe better Roses," conveys the idea of an excellent garden, but with no half-dozen Roses quite so fine as the best of his own growing. Satisfaction without alloy is expressed in some such terms as these: "Man, ye should see So-and-so; a grawnd place; beats me wi' Strawberries, and no far ahint wi' Leeks, and I'm no sure but he has me wi' Ingins!"

James, moreover, affects a proprietary air where the garden is concerned, which he seldom does in the case of the other multifarious duties that engage his attention. Truth to say, he has practically made the garden what it is, and so closely does he feel the tie between it and himself, that instead of inviting his friends to inspect his garden, he attacks them with the formula, "Come away in and tell us how I'm looking"; while, should the visitor unduly delay giving expression to his opinion, he is quickly reminded by the query, "Weel, what d'ye think of me? My Carcases (Cactus Dahlias?) are no just the thing, and no doubt ye've seen finer grossers; but I was thinking I might ha' been waur!" As I had good reason to know that James was trusted by his master and mistress, what was my dismay to be consulted by him on so serious a question as the resignation of his many offices? No longer young, it was a question with him almost of existence, but he had worked himself into a condition of body and mind that rendered his life quite miserable. And what, think you, it was about? Simply that he believed his services were no longer acceptable. In one or two things his master had given him the impression that he was not pleased. He came less into the garden, and left him unnoticed, when formerly he was always consulting him about some little thing. Matters that hitherto would have passed unheeded now became confirmations, strong as proofs of holy writ, that his employer had grown tired of him. A talk over his troubles left him decided to do nothing hastily, and very soon he knew that all his fears were groundless. I moreover took occasion to throw out a feeler when next I met his master, with the result that the servant was declared an invaluable one, and, indeed, had come to be looked on more as a friend than a mere servant.

The super-sensitiveness of which the above is an instance is by no means rare among gardeners, and there is good reason for thinking it is at the bottom of much of the changeableness so sadly apparent in the character of many gardeners. I could multiply instances; I have felt in exactly the same way myself, and I have had men under me

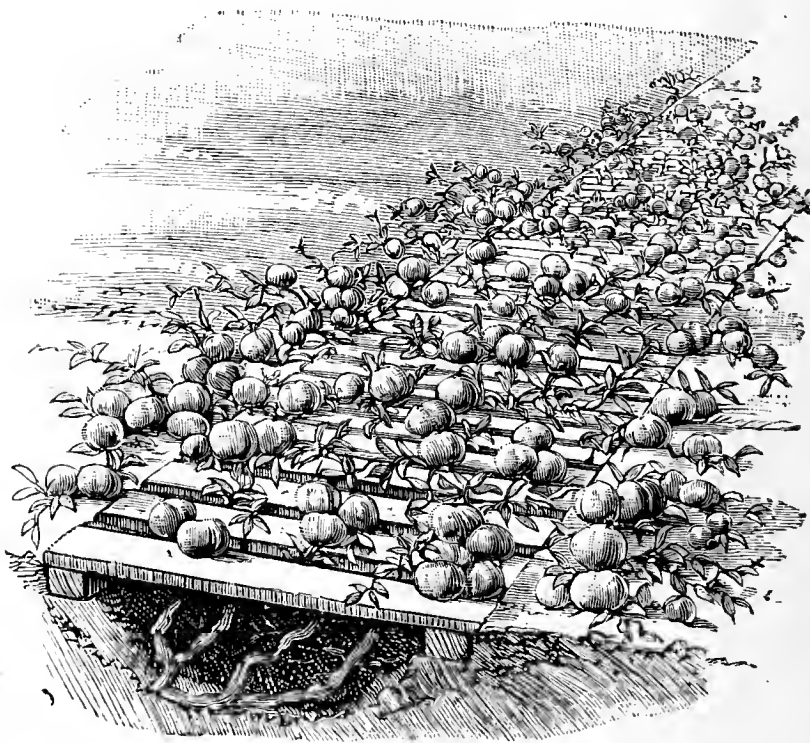
who somehow had caught the idea that their services were no longer wanted, without any shadow of reason in fact. Sometimes, no doubt, employers have themselves to blame, and not so long ago I was pleased to be able to secure another situation for a thoroughly good man who found it intolerable to serve his then master; yet, when he resigned his situation, the employer was astonished that he was not pleased with his place, himself being absolutely satisfied with his gardener!

This brings us face to face with what may well be called the personal equation in gardening. Some employers make much of their gardeners; others pay little attention to them. A personal friend has told me so long a period as nine years had passed without his meeting or speaking to his employer. Many men would have accepted this as a hint to quit when no such thing was intended. It is, I confess, an extreme case, but it serves to emphasise what I want to impress on those who may think they are being treated coldly, that they may not make too much of a small matter.

Occasionally, too, the temperaments of employer and employed are so essentially at variance that, much as a master may value the gardener from a professional point of view, he does not take to him as a friend; but it will be as hard, and, I believe, also an uncommon case, if some of the family do not come into close relations with him. There is a class of employers, too, that treat all their servants with the greatest urbanity, while they are as yet new to the place and their duties, and who by-and-by subside into habits that what I may call thin-skinned people find it very hard to endure. The only antidote is to thicken one's epidermis, so that blow hot, blow cold, a conscientious fulfilling of duties is sufficient to throw off any condition of social atmosphere. It is unnecessary to enlarge on a subject so very extensive in its purview. Enough to say that the custom of making rods for one's own back out of nothing is one to be greatly deprecated, because it produces, perhaps, a more severe chastisement than real fault finding, and it has a tendency to lead to ruptures entirely of one's own production, and fatal to any little success in life it might be possible to secure.—TATLER.

### Tomatoes in Trenches.

The method of growing outdoor Tomatoes in trenches used to be practised by Mr. J. Forbes, when at Dover House, Roehampton, Middlesex. On a sheltered plot of ground, sharply sloping to the south, a trench was dug about 4ft wide, and strong Tomato plants were placed in suitable soil at the proper time in May. The trench was covered with open latticework, through which the plants grew, and were trained down to it, and fruits were thus obtained in abundance during the summer. We bring up the matter now, in order that a place may be marked out for a trial of this plan next spring.



Tomatoes in Trenches.

# NOTES & NOTICES

## Royal Appointments.

Messrs. William Bull and Sons, New Plant, Seed and Bulb Merchants, 536, King's Road, Chelsea, London, S.W., have been honoured with the appointment of Florists to His Majesty the King. \* \* Messrs. Dobbie and Co., Rethesay, Bute, and Orpington, Kent, have received a Warrant of Appointment as Seed Growers and Florists to the King. Messrs. Dobbie and Co. held a similar appointment to the late Queen Victoria.

## Journal Rose and Chrysanthemum Analyses.

Mr. Edward Mawley's Rose Analysis (1895-1902) is now in hand, and will appear in our issue for November 20, together with the portraits of some of the leading commercial Rose growers. \* \* In reference to the Chrysanthemum Analysis, which will be published very early in January, Mr. E. Molynaux wishes us to state that he will shortly be sending out his papers, and asks the experts to note well their favourites, in order that the audit may be strictly just and valuable.

## Mistletoe in Paris.

Last week the first Mistletoe made its appearance in the Paris streets. It is not sold from barrows, as at home, but the hawkers carry it in bunches slung upon poles from 6ft to 10ft long, and what they sell is not Oak Mistletoe at all, but Mistletoe from Apple trees.

Brittany, says the "Evening News," is the only one of the French provinces where the real Oak Mistletoe is found, and this is sent off to London by ship-loads from Granville and St. Malo, and obtains better prices than it would in Paris. Even our Christmas decorations, therefore, are made in France.

## Appointments.

Mr. W. Hammond, for the past two and a half years foreman in the fruit houses and kitchen garden at Ashton Court, has been appointed gardener to E. S. Goodsell, Esq., Caius Cross House, Stroud, Glos. \* \* Mr. Alex. McLean, gardener to Sir Wm. Clark, Curling Hall, Largs, N.B., has been appointed gardener for Earnock. \* \* Mr. John Tunnington, late head gardener to Sir H. Ingilby, Ripley Castle, Yorks., has been appointed head gardener to Col. Charlesworth, Fern, near Salisbury, and enters on his duties in a few days. \* \* Mr. Geo. Hawes, late head gardener to W. Grazebrook, Esq., Thenford House, Banbury, as head gardener to Mrs. Goodson, The Grange, Sutton Courtenay, Abingdon, Berks.

## Fruit Growers and Railway Rates.

That any part of England, more particularly such comparatively accessible counties as Hereford, Worcester, and Somerset, should under any circumstances be debarred, by prohibitory railway rates, from selling fruit profitably in English towns is indicative of a very regrettable state of affairs. It is not to be wondered at that the organisations formed to look after the interests of the fruit-growing industry should have resolved to make a move in the matter, for it is not creditable either to the industry or the railway companies that the present state of things should obtain. The fruit growers at the recent Worcester meeting resolved to press upon the railway companies the urgent need of improvement in the loading of fruit, the use of refrigerator cars, and closed but ventilated trucks, more prompt delivery from the terminus to the market, quicker return of empties, and clearer definition of owners' and railway companies' risks. This is a fairly heavy list of demands, although probably it does not in the least exceed the alterations required by the nature of the traffic. It is pretty certain, however, that if these requests are conceded the railway companies will require in return some kind of guarantee that the consignments will be prepared and regulated as to quantities in such a way as will enable them to perform their indispensable part expeditiously and cheaply. It is essentially a case of give and take, and if both parties approach it in this spirit a satisfactory settlement should be easily arranged.

## Incurved Chrysanthemum Charles H. Curtis.

For a number of years now this variety of sterling merit has been seen on exhibition boards at the Chrysanthemum shows. This week at the Royal Aquarium it formed one of the finest half-dozen incurved Chrysanthemums, having size, even build, globular form, firmness, smoothness, and rich colour (intense golden yellow) to commend it. A First Class Certificate was awarded for it some years ago. Growing about 5ft, and producing good blooms as a rule, it is one which every grower ought to have. A figure of it is given on page 431.

## Horticultural Show Schedules, &c.

We have received the following schedules and syllabuses: Advance prize schedule for the spring show (May 20 and 21) of the Royal Caledonian Horticultural Society. Secretary: P. Murray Thomson, 5, York Place, Edinburgh. Ipswich and East of England Horticultural Society. The Chrysanthemum show will be held on November 11 and 12. Secretary: H. E. Archer, 13, Museum Street, Ipswich. Birmingham and Midland Counties Gardeners' Mutual Improvement Association. Programme of lectures for autumn session. Secretary: W. L. Deedman, Hawthorn Road, Chad Valley, Edgbaston. Devon and Exeter Gardeners' Association, autumn session syllabus. Secretary: Andrew Hope, 38, Prospect Park, Exeter.

## The Pearson Herbarium.

The Department of Botany in the British Museum has acquired, says the "Yorkshire Daily Post," the extensive collection of British and exotic Hepaticæ, or Liverworts, formed by Mr. W. H. Pearson. The collection consists of over 9,000 specimens, and is mainly representative of British Hepaticæ; but it contains also valuable material from New South Wales, Tasmania, Canada, Madagascar, South Africa, and elsewhere. The scientific value and interest of the collection are much enhanced by the fact that Mr. Pearson's recent standard book on British Hepaticæ is based on the study of his specimens, which have become the property of the nation. Owing to the recent purchases of the Stephani and Bescherelle cabinets of exotic Liverworts, the Museum possesses an unrivalled series of Hepaticæ, the deficiencies in the British collection being now made good by the Pearson Herbarium.

## Canadian Fruit in Liverpool.

Since your paragraph appeared announcing the consignment of Canadian Apples, the Liverpool public have had a splendid opportunity of viewing some of the most beautiful specimens ever seen in Liverpool. Too many of our foreign Apples lack the weight so desirable, but with the appearance and weights of some of these choice Canadian fruits no fault could be found, as a Bietigheimer weighed one pound; King of Pippins over fifteen ounces; Fallawaters, fourteen ounces; and also some grand examples of Ribstons, Gloria Mundi, and Blenheim. They make an effective display arranged in baskets, and Mr. Thomas Dowd must consider himself honoured to have the care of this valuable collection, which had been sent direct from the exhibition at Kentville, King's County, Canada, by Sir F. Bowden and Mr. L. S. Eaton.—R. P. R.

## Isle of Wight Horticultural Association.

The monthly meeting of the above Association was held at Warburton's Hotel, Newport, on Saturday last, November 1, when Dr. Groves, B.A., J.P., presided over a good attendance of members to hear a paper on the "Cultivation of Cyclamens," read by Mr. A. J. Cole, of Sandown, who treated the subject in a very able manner, and supplemented his remarks by staging a mass of superb blooms of Cyclamen persicum. On the motion of the chairman, seconded by Mr. A. Kime, a hearty vote of thanks was accorded to the essayist. A most interesting and profitable discussion followed, in which Messrs. Sheath, Bennett, Collister, Brett, and several others took part. Mr. Collister was accorded the best thanks of the meeting for staging a lovely collection of Tea-scented Roses; also Mr. J. Lee, gardener to Dr. Riley, J.P., Bramble Chine, Freshwater, for a superb collection of unnamed seedling Zonal Pelargoniums, all his own raising, and in the opinion of some of the members equal to the best named varieties. Several new members were elected.



**Winter Strawberries.**

Wild Strawberries seem to be found in Devon and Cornwall nearly all the year round. No less than twenty-three ripe ones are reported to have been picked at St. Germans recently.

**October Weather in Bucks.**

The rainfall at Temple House Gardens, Great Marlow, Bucks, for October, 1901, was 1.79in. There were three foggy mornings during the month, viz., on the 19th, 24th, and 28th. The highest temperature for the month was 64 on the 10th, and the lowest 30 on the 18th. The highest for October, 1901, was 73 on the 1st, and the lowest 27 on the 26th. The rainfall for October, 1901, was 2.19in. We are situated close to the banks of the River Thames, and 105ft 9in above sea level.

**Apple, Rival.**

This already much-esteemed Apple was certificated in 1900, and is offered by Messrs. W. Clibran and Son, of Oldfield Nurseries, Altrincham, Cheshire, from whom a brightly coloured fruit was sent to us a week ago. Our figure of it on a back page gives a good impression of its appearance. It is a free grower, with an upright habit, and well adapted for orchard cultivation: the fruit has a very good flavour. It is a good cropper. Its exceptionally handsome appearance should insure for it a ready welcome for market purposes. The flesh is creamy white, soft in texture, and of good flavour. The colour is bright red, splashed with crimson on the sun side, and rich yellow on the shaded side. It is in use for dessert at this season and onwards. The parentage was Peasgood's Nonesuch x Cox's Orange Pippin.

**Vine Culture at Liverpool.**

The first lecture of the session was held in the secretary's offices, Victoria Street, on Saturday, the chair being occupied by Mr. T. Foster, chairman, who presided over a good attendance. The lecturer for the evening was Mr. J. Stoney, the esteemed head gardener to F. H. Gossage, Esq., Camp Hill, Woolton, who gave an admirable and thoroughly practical address on the cultivation of the Grape, his remarks being sound and of incalculable benefit, more especially to the younger generation of gardeners. Muscat of Alexandria and Madresfield Court have all along been specialties of Mr. Stoney, and few gardeners know their peculiarities better, as witnessed at the Liverpool exhibitions, where they played many important parts. The writer has in his mind's eye some splendid bunches of Madresfield Court grown in an outside border, the entire centre of the house being devoted to Camellias in pots, yet there was no lack of bloom on bunches and no cracked berries. This was at Allerton Towers, and now at Camp Hill the same progress can be written down. Coming from a practical man like Mr. Stoney, the lecture of Saturday last proved invaluable. The usual votes of thanks were passed.—R. P.

**Highgate and District Chrysanthemum Society.**

The following awards were made to the Trade Exhibits after the judging had finished last Wednesday, viz: Gold Medals to Messrs. W. Wells and Co., Limited, Earlswood Nurseries, for a group of Chrysanthemums. Miss Bevan, The Lodge, East End Road, East Finchley, for a dinner table with fruit, flowers, &c., with centres and d'oyleys in satin, with hand-painted Chrysanthemums in miniature, laid out for fourteen persons. Silver-Gilt Medals to Messrs. W. Cutbush and Son, Highgate, for a group of Carnations and flowering plants. Austin and Co., Kingston-on-Thames, for collection of bottled fruits. Williams and Son, Fortis Green, for collection of Primulas. Silver Medals to B. S. Williams and Son, Upper Holloway, for group of flowering and foliage plants. Cheal and Sons, Lowfield Nurseries, and J. Russell, Richmond, for collections of fruit. W. Wood and Son, Wood Green, for garden sundries. Pearce and Co., Upper Holloway, for greenhouses, &c. Bronze Medals to W. Colchester and Co., Ipswich, for exhibit of pure Ichthemio guano, &c. Mr. Williams (Hammersmith) and Mr. C. J. Wakefield, Hindon Street, London, for floral aid stands for cut flowers. Mr. J. H. Witty, Highgate, for collection of shrubs. The Floral Committee met in the afternoon, October 29, and First Class Certificates were awarded to the following varieties of Chrysanthemums: Lord Alverstone and Mrs. A. McKinley, both exhibited by W. Wells and Co.; Mrs. Mileham, exhibited by Mr. T. L. Turk.

**American Flower "Combine."**

A combination of firms representing a million dollars has been formed for the purpose of controlling the New York market for flowers.

**Giant Seed Potatoes.**

Mr. T. Kime, of Marcham-le-Fen, has bought a new variety of seed Potato, named the Northern Star, in Lincolnshire, at the record price of £500 per ton. Twenty-two pounds of this Potato produced 15cwt of tubers.

**Sussex Weather.**

The total rainfall at Abbot's Leigh, Hayward's Heath, for the past month was 2.07in, being 1.80in below the average. The heaviest fall was 0.46in on the 15th; rain fell on thirteen days. The maximum temperature was 65deg on the 10th, the minimum 32deg on the 19th. Mean maximum, 53.27deg; mean minimum, 41.18deg; mean temperature, 47.22deg, which is 1.33deg below the average. October has been with us, on the whole, a pleasant month, especially towards its close. There has been no frost to kill the Dahlias, and they are still bright with bloom. Roses have been, and are still, quite gay, and Violets, too, are quite plentiful and welcome for picking.—R. I.

**Walsall Gardeners' Association.**

The third fortnightly meeting of the autumn term of this comparatively new society was held at the Victoria Temperance Hotel on Tuesday night, October 28, with the popular chairman (a successful amateur orchidist) presiding. There was a good muster of the members. Mr. W. Gardiner, Harborne, Birmingham, delivered a lecture, entitled "A Chat about Conifers, with Illustrations of Cones." The latter were objects of marked interest to the audience, more especially such as specimens of the Monkey-puzzle (*Araucaria imbricata*) and coned branchlets of *Abies cephalonica*, *Pinus Jeffreyi*, and *P. Ayacahuite*, *P. insignis*, and *P. excelsa*; also Cedars Libani, Atlantica, and Deodara; also of *Wellingtonia gigantea*, and *Pseudotsuga* (*Abies*) *Douglasii*.

**Watering at Planting.**

Nurserymen are often asked if trees should be watered at planting. In ordinary spring planting, water is seldom necessary; but late in spring, when buds are pushing, and heat is increasing, watering often helps a tree to recover from the check of transplanting, especially should the soil be dry. In autumn, should the ground be dry, as it often is, watering is of much benefit. The dry soil can be got around the roots nicely, and a good watering compacts it. The moisture and heat combined cause new roots to form at once, at least, before cold weather. In a general way it may be said that a good watering at planting never hurts a tree, and is usually a great help to it. The continual watering all summer long, which amateurs so often indulge in, has killed more trees than it has saved. One watering is sufficient, unless a time of drought sets in, calling for the watering of all trees.

**Bristol Gardeners' Association.**

A most successful meeting of this society was held at St. John's Rooms, Redland, on Thursday evening last, when Mr. J. H. Jarvis, of the Newport Gardeners' Association, gave a most exhaustive lecture on the Cultivation of Pot Roses. Mr. E. H. Binfield occupied the chair, and there was a good attendance. The lecturer divided his lecture into sections, dealing with each in a very practical and masterly way, and it was quite evident the subject was in good hands. He fully described every detail required for the successful cultivation; the houses most suitable; soils and composts, pruning, and general treatment. Prizes for six cut Roses were awarded, the first going to Mr. J. C. Godwin (gardener, Mr. McCulloch); Mr. A. Baker (gardener, Mr. Orchard) obtaining second. Certificates of Merit were awarded to Mr. Ross for six dishes of Pears; Mr. Gilbert Howes (gardener, Mr. White) for *Dendrobium chrysanthum*; Mr. W. Howell Davis (gardener, Mr. Curtis) for *Cattleya labiata*; Lady Cave (gardener, Mr. Poole) for cut specimens of Bamboos, and to Col. Goss (gardener, Mr. Shaddick) for a dish of open-air Tomatoes and a well-grown Croton. The next meeting will be held on November 13, when Mr. E. H. Binfield will give a lecture on stove and greenhouse Ferns.—H. K.

## Hardy Romuleas.

It seems unfortunate that so few of the Romuleas are obtainable in the ordinary course of trade from the bulb dealers. There are among them some lovely little flowers, and it is probable that all, or almost all, of the species belonging to the Mediterranean region would prove hardy in dry, sunny places in light soil with plenty of shelter from cold winds, as may be had in almost any rock garden. Of the twelve species belonging to this region, recognised as such by Mr. J. G. Baker, there are very few procurable by purchase, and one or two of those which are not quoted by the dealers would appear to be among the most desirable of the genus. In the following brief notice of these flowers I have purposely excluded the species from the Cape and tropical Africa, as hardly likely to be hardy in the open in our climate. It may be mentioned now that these plants are often to be found under the names of *Trichonema*, and that Mr. Baker classes them, in his arrangement of the Irideæ, in the tribe *Sisyrinchieæ*, and the sub-tribe *Croceæ*, which comprises the *Crocus*, the *Syringodea*, *Galaxia*, and *Romulea*. This will give a general idea of the character of the Romuleas, which are small *Crocus*-like flowers with narrow, grass-like leaves, and opening out only in the sun. This last point certainly limits their usefulness, but they are attractive enough when open to repay one for the shortness of the display in any one day. The flowers show well beside the leaves at their flowering time, and make a pleasing, if quiet, effect. I like to plant about 2 in deep, and to give a covering of cocoa fibre for the first winter, allowing this to decay naturally. This helps to protect the small *Crocus*-like corms. I have planted at various seasons, either when in full growth, when at rest in autumn, or, with late received corms, have kept them until early spring in a dry state.

The *Romulea* most easily obtainable is neither so scarce nor so expensive as the others, and may be planted in some quantity at a very small cost. This is *R. Bulbocodium*, a widely-spread species in the Mediterranean region, which has had at various times the names of *Ixia Bulbocodium*, *Trichonema Bulbocodium*, *T. collinum*, and *Romulea uliginosa*. It has pretty lilac flowers with a long yellow throat. It has given rise to a number of varieties, several of which are hardly distinguishable from the type, and others are not apparently obtainable. *Grandiflora*, *rosea*, *pulchella*, and *syrtica* belong to the former category, and are sometimes to be found in Continental catalogues; while *flaveola*, yellowish white; *subpalustre*, white near the base and lilac above; *umbellata*, deep lilac on short peduncles; *crocea* and *nivale*, both with yellow flowers tinged with lilac, may be classed with the unobtainable ones. *T. B. pylum*, frequently sold as *T. pylum*, is, however, in commerce, and is one of the prettiest of the Romuleas, with large white flowers with a yellow throat.

*R. Clusiana*, or *Clusi*, which has long, yellow flowers tipped with lilac, comes from Spain, and is also in cultivation. The white variety of this is still rare. *R. Columnæ* is also in cultivation, and is desirable, though less so, in my opinion, than some. It comes from various habitats, said to range from the Azores and England and Portugal to Greece. This species has a short yellow tube, and has pale lilac segments veined with purple. *Modesta* and *sub-albida* are said to be allied forms. *R. rami-flora*, with narrow lilac segments and a yellow throat, is also procurable.

I have had *R. Linaresi* from the south of Europe. It has its flowers of a bright lilac down to the base. *Elongata*, *grandiscapa*, *ligustica*, *Requieni*, and *Relievieri* ought all to be hardy with us; while the fine *crocifolia*, a Dalmatian species with large bright yellow flowers, ought to be introduced if possible. *Numidica* is doubtfully hardy, I believe, and its Algerian habitat is not very encouraging for a trial in our climate. These little flowers come in very acceptably at a time when such unobtrusive blossoms are welcome, varying in date from March to July, few blooms, however, appearing at the earliest period named. With a little extra care for the first winter or two, they will give much satisfaction for those who are admirers of the smaller flowers with bulbous roots. I have to express my indebtedness to Mr. Baker's invaluable "Handbook of the Irideæ" for much information.—S. ARNOTT.

### Cedar Wood.

The resistance of Cedar wood to decay has long been famous, and Cedar fence-posts often last for generations. A remarkable instance of the indestructibility of Cedar has been noted in the State of Washington, where a forest of Hemlocks, near Acme, has grown up over an ancient buried forest of Cedars. The trunks of Cedar, although lying in a moist soil, have been almost perfectly preserved for at least 150 years, the length of time that the rings of growth show the Hemlocks to have been growing above their fallen predecessors.

## Pruning Fruit Trees at Planting.

There are few gardening operations in which there is a greater diversity of practice than in this. The ordinary amateur, who hears one opinion from his nurseryman, another from his gardener, and finds something different to that of both in some fruit manual or cultural notes, may well feel puzzled as to which is the best course to pursue. Let us hear what two or three authorities say, and see how much they differ. A Kentish firm of great renown, and well represented at the last Crystal Palace Fruit Show, says: "Prune fruit trees, immediately on arrival of trees, whether standards or dwarfs, as per cross-cuts shown on the enclosed engraving (one-half to two-thirds of their length), and if you err at all, let it be that you shorten their shoots even more than shown." One of the largest raisers of fruit trees in England, if not the largest, says: "Plums, Peaches, and Nectarines may be pruned back the first year of planting in April; and, if planted early, Apples, Cherries, Apricots, and Pears, as garden trees, may be treated in the same way, but they generally succeed better if allowed to grow for a season without pruning."

In an essay, which secured the gold medal from the Worshipful Company of Fruiterers, the author advocates the pruning of trees in the spring following planting. The Royal Horticultural Society, in their excellent pamphlet on fruits for cottagers, says: "In order to promote good strong growth, standard Apples, Pears, and Plums should have their shoots shortened at planting to about one-third of their length, and young bush trees should be treated in the same way as standards." Here is a conflicting mass of advice! Each one of those quoted above is presumably prepared to back up his advice by experience, and could make out a good case for it. Doubtless, all these methods answer well in skilled hands, though some better than others. One is reminded of the lines in the once famous, but now little read, classic:—

'Tis with our judgments as our watches, none  
Go just alike, yet each believes his own.

I have adopted one uniform practice for some years past, and do not intend changing it, as experience shows it to be so satisfactory with my soil and situation: but, with such a weight of authority as quoted above, it would be presumption on my part to speak dogmatically in favour of any one system, but it may be profitable to look into the various methods, the scientific basis upon which they rest, and the way they actually work in practice. A knowledge of general principles underlying diverse practices is often more helpful than a knowledge of such practices themselves.

If we were to carefully examine the earth from which a young fruit tree has just been taken up we should find it full of pieces of root-fibre. Each one of these formerly helped to nourish the tree, and therefore the tree has as much less power to feed itself in its new home, before it gets established, as is represented by the loss of all these root-fibres. If the tree still has the same amount of branch to maintain, it is obvious that it can have but very little energy left for adding to its liabilities by making fresh shoots the first year, and the probability is that most of the buds which should have formed shoots will form blossom-buds for the following season, while many of the buds on the lower parts of the stems will not break out at all. The season following the tree will probably bear fruit, but the branches, being no thicker than when the tree was planted, will bear down to breaking with even the weight of a small quantity of fruit, and the shape of the tree will be spoilt for the future. This is universally agreed upon by experienced men, and, therefore, those who advocate leaving the trees untouched for twelve months also advocate the cutting back, at the end of that time, not only of any young growth that may have been made the first season, but of a large part of that of the season before—their last season in the nursery—so that when you have had the tree a year and a half it is much smaller than when it was planted; but from these shortened branches of two-year-old wood very strong growths will burst out the following spring, and thus what is lost in the size of the tree is gained in vigour.

There is undoubtedly a good deal to be said in favour of this system for standard trees, where the first object is to get a strong healthy tree, able to bear the weight of fruit before a crop checks and enfeebles the growth. It is doubtful, however, if any better results are obtained this way, even with standards, than is obtained by cutting back the branches to half their length at the time of planting—always supposing this to be done before Christmas—when two good strong shoots will grow from each cut-back branch, while on the lower part of it fruit spurs will form; and then, by cutting off not more than a quarter of these young shoots in the autumn fruit spurs are formed upon them and strong growth maintained, and thus the branches become well feathered with fruit-spurs—a very desirable object gained. Thus we see the working of this general principle—cutting back a newly-planted tree induces vigour of growth, leaving them unpruned leads to fruitfulness (and, probably, unsightly, naked branches) even before the tree is strong enough to support it.

When we come to bushes, pyramids, and dwarf trees generally,



the case is very different. We see that deferring the cutting back of the trees till after a season's growth adds to their vigour of growth.

But do we want to encourage this vigour in dwarf trees? Is it not a fact that excessive vigour is an evil we generally have to fight against in young dwarf trees until a heavy crop of fruit has brought about a well-balanced growth? Surely, the object is to get dwarf trees to bear early, so that excessive vigour may be restrained and the necessity for lifting and root-pruning obviated, as this usually means the loss of a season's fruiting. By the system of cutting back at the time of planting, as suggested above for standards, fruit spurs are formed all along the branches—a sine qua non for a really productive dwarf tree—and it does not harm it at all to bear fruit the second season, as the formation of a strong tree is not of prime importance in such cases, though this is pretty sure to come.

The pruning of dwarf trees must to some extent depend upon the object for which they are grown. If they are planted by the acre, where a small early return is not wanted so much as an ultimate large one, the trees are allowed to grow much bigger, and, consequently, the same thing may apply to them in that case as was mentioned above in regard to standards, namely, that by leaving the pruning till a year or eighteen months after planting, stronger growing trees are ultimately obtained, though pretty nearly as strong growth may be obtained by cutting back harder at the time of planting and disbudding in the spring, so as not to get too many branches formed, but just as many as required, and those strong and vigorous; but when trees are planted by the acre they can seldom get this delicacy of attention, and hence the deferred pruning may answer best in such cases.

As a rule, in gardens the bushes are not wanted very large, and the space is not allowed them to become so, and a small early return is usually desired, if only that of a dozen fruits on the tree. Where Apple growing, or that of some other fruit, is a sort of hobby, the desire, of course, generally is to get a considerable number of varieties, and to get them to fruit as soon as possible. In such cases, and with the amateur generally, the balance seems to be in favour of cutting back the branches to a third of their length at the time of planting. There is one thing which cannot be too strongly insisted upon, and that is, that any system of pruning to be successful must be combined with a knowledge of the sorts operated upon. Different varieties of the same fruit have as different constitutions as human beings, and what may be quite right for weak growing Apples, for instance, like Scarlet Nonpareil or Mannington's Pearmain, may be quite wrong for rampant growers like Bramley's Seedling or Blenheim Orange. Pruning should aim at increasing the vigour of the former two and decreasing that of the latter two.

The above has been an attempt to show the general principles upon which the pruning of fruit trees at planting, or a year after, is based, and though nothing is said dogmatically as to the rightness or wrongness of either system, it may be helpful to the reader, upon whom the foregoing dissertation may not have left a very clear impression, to give an account of one's own practice and experience as applied to the different sorts of fruit trees—to descend from the general to the particular, in short.

Apples, Pears, Plums, Cherries, and Apricot standards have all their branches cut back at the time of planting to one-half or a third of their length, weak-growing varieties being cut back harder than strong-growing ones. Bushes, pyramids, and wail trees—all forms of dwarf trees, in fact—are cut back to two-thirds to three-quarters of their length, according to the strength of the shoots or branches. In the spring the growth of the standards is regulated somewhat by any misplaced shoots, or any for which there will not be room being removed completely. In the case of dwarfs such shoots are usually pinched back to four or five leaves, and the secondary growths to one or two, though, at the same time, any very badly placed shoots are removed. Disbudding, as this is termed, is very helpful in forming young trees, and it is better for the tree for tender young shoots to be just rubbed off than to be cut off later on. Especially is this the case with stone fruit trees.

Peaches, Nectarines, Gooseberries, and Black Currants. These being all berries on the young wood, the stronger the growth that can be developed within certain limits the better. Therefore, these are cut back hard at the time of planting, strong shoots to two-thirds of their length, and weak ones to one-third. Disbudding with Peaches and Nectarines is, of course, a necessity.

Raspberries are shortened to six or eight inches the end of March or beginning of April. If shortened in the autumn the canes frequently die down further, which is supposed to be caused by the moisture getting into their pithy stems and there freezing.

Trees which are subjected to the treatment just described are invariably planted as early in November as possible. With late or spring-planted trees it is probably best to defer all pruning till after a season's growth. Pruning trees late in the winter or early in the spring makes the trees later coming into leaf, with the result that less root power is developed during the

summer, and, consequently, the growth is very feeble. It weakens the trees, too, in another way, in that, during February or March, the slowly rising sap is most of it going to the buds near the ends of the branches—whence the strongest shoots usually issue—with the result that the summer growth is made from the weaker buds. This is remedied, at least, to a great extent, when the branches are shortened in November.

There is one very important matter which has not been mentioned, and that is, never let the roots of trees get dry before planting, as the delicate root fibres are very easily killed, much to the injury of the tree. If the trees have to be a long time out of the ground before planting, from wet, frost, or other causes, it is a good plan to immerse the trees—roots and branches alike—in a tub of water for twenty-four hours, which will ensure all being plump when planted.—A. PETTS.

## Puzzles—Horticultural.

Potatoes are puzzling things to the average mind, and are interesting as well as useful, because they are so erratic. One never knows what to expect from them at digging time, because the appearance of their tops indicate but little how things have fared below the soil. These matters have been brought forcibly to my mind recently at a social gathering "in the country." After supper out came the pipes, and for a time silence reigned as each contemplated the wreaths of rising smoke. At last the stillness was broken, the topic of the speaker being a genuine one—in the country—'twas about gardening. I should here mention that each of us possessed a bit of a garden, and after having for a few years spent what time we could spare in practising the ancient art according to our own notions, each seemed to look upon himself as quite an authority on the subject. But the Potatoes have certainly been too much for some of us this year, which the following remarks will show.

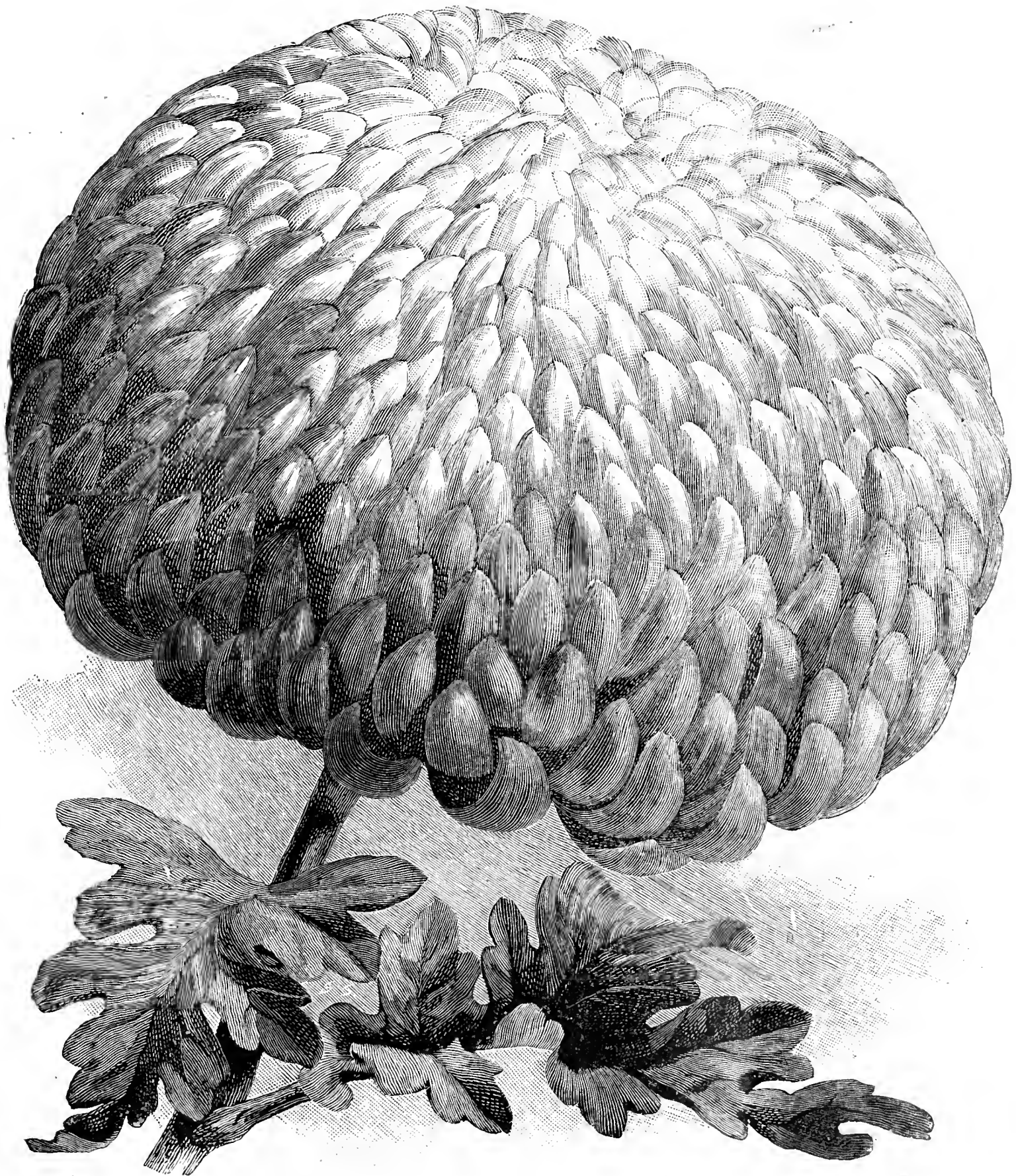
"Potatoes," said one, "why, my early ones were the worst crop I ever had. The tops turned yellow before they appeared to be fully grown, the tubers were small, and what few I could spare for table after having saved enough for seed, were scarcely worth eating, and yet they were my favourite sort, Puritan." "Ah!" chimed in another, "I am in a far worse plight than you, for my late sorts have produced nothing to speak of except tops. They looked splendid during the summer, grew very strong, and were perfectly healthy, but when I tried a root or two I found only a very few tubers about the size of walnuts. I offered my neighbour the whole six rows for the trouble of digging, and he thought it wouldn't be worth his while." Very much I should like to know why Potatoes behave thus when fairly good treatment is given them.

It seems, too, that appearances are sometimes deceptive in the opposite direction, according to what a third member of our little band told us. Said he: "I wanted to grow a few tubers for show, and, among others, I planted Ideal. When they came up the tops were almost as weak as knitting needles, and although they improved by degrees, the haulms were always weak, thin, and wiry. Guess my surprise, then, when, at digging time, I found beautiful shapely tubers of good size, and managed to beat all the rest of you at the show!" Is this the usual behaviour of Ideal? How much I should like to know.

### CANKERED APPLE TREES

have often set me ruminating, and even now I do not understand their ways, because those who ought to know tell me that canker is a fell disease hard to eradicate, and, if left alone, disastrous to the trees. Now, I know of several trees which have eruptions studding their trunks and branches so closely that it is difficult to find a smooth bit of bark; such trees, I am told, have canker badly, and yet nearly every year they seem to bear well, while healthy trees growing near are fruitless. The fruits on the former trees are certainly not very large, but still they colour well, and although the trees must be old they are only of moderate size—the canker seems to have stunted them and made them bare. Is canker, then, after all, such a troublesome disease, seeing that it brings money to the pockets of some growers? Please tell me, someone, through the pages of the *Journal of Horticulture*. I should think that if those who have cankered trees would feed them well, and water with liquid manure, so as to increase the size of the fruit, there would not be much to complain of.

Talking, or, rather, writing, of liquid manure, reminds me of another point I have an idea about. Some time ago I saw a man watering an Apple tree in an orchard. The fruits were numerous, but small. He thought a little liquid manure would help to increase their size. I also should think it ought to, but it did not in this case. The tree was a large one, with a hollow space around the trunk; all the liquid was poured there. I thought the man should have watered a good distance from the stem as well, because, when digging under my Apple tree, I find the most roots a long way from the stem. Will someone kindly enlighten me on some of the above points, so that, in regard to them, I may no longer remain an—IGNORAMUS.



CHRYSANTHEMUM, C. H. CURTIS. (See page 427.)





### National Chrysanthemum Society's Show Judges.

I have just been looking through the schedules of prizes of the National Chrysanthemum Society for 1902, and I find that five members of the Executive Committee are the paid judges at the exhibitions of the society, and of this number three of them are the principal officers of the society—men who, as members of the Show Committee, are supposed to be intimate with the names of the exhibitors and the classes in which they exhibit; and as members of the Show Committee they, I imagine, have the direction of the placing of the various exhibits. More than this, I also perceive that the three principal officers who are judges are also members of the Arbitration Committee, whose duty it is to deal with any protest as to the awards of the judges; so they may have to consider protests made in reference to their own awards. By referring to the schedule of prizes for 1901, I find that eight members of the committee were judges in that year, so that there is reason to hope that the proper but unsuccessful attempt made at the last general meeting to so alter the rule of the society as to the election of judges so as to disqualify members of the committee from acting in that capacity—an alteration which the "Gardener's Chronicle" stated to be both just and proper—has had some good effect, as seen in the reduction of the number of judges in the present year taken from the committee.

The practice of selecting to make awards those who administer the affairs of the Society is opposed to universal practice, and so liable to be adversely criticised that I am astonished so influential a society, which I have heard claims to be the foremost special floricultural society in the kingdom, sets such a bad example to its many affiliated societies. If the whole of the men capable of judging Chrysanthemums, &c., are included in the committee, there would be some excuse for what is little better than a scandal. So far from this, there are about the country many men who, in addition to possessing the highest qualifications as judges, are also warm supporters of the society; but these receive no invitation, though in not a few cases their services are in demand as judges elsewhere.

If anyone will turn to the back page of the third leaf of the schedule of prizes, they will see set forth the composition of the Schedule Revision Sub-Committee, who have the nomination of the judges; four of the members of that committee are judges, and so nominate themselves. If any six members of that committee will agree among themselves to nominate and vote for each other and no other candidate, taking care to be present at the meeting when the nominations are made they are certain to be elected, as I am informed that the Executive Committee who make the final selection, invariably accept these self-made nominations. It is a scandal which is operating to discredit the society in the provinces. The sooner the members remove it the better for the society, which, just now that it has to seek a new home, needs all the support it can obtain.—A COUNTRY MEMBER.

### Floriferous Lapagerias.

I was much interested to read in the *Journal of Horticulture* of October 25, page 378, of the very fine specimen of *Lapageria* growing under the care of Mr. Powell in the gardens of Colonel Brymer near to Dorchester, and when seen as described they are a gorgeous sight to look upon. There is no other greenhouse plant as a climber that I am acquainted with that furnishes the roof with such a profusion of flowers, and yet one so seldom meets with *Lapagerias* under flourishing conditions. In the gardens here the plants grow with the utmost freedom each season, putting up their Asparagus-like shoots from the base of the plants, and growing some 15ft to 20ft in length in a season. I shall be interested, Mr. Editor, to know the number of blooms recorded on a single shoot from plants in other gardens. I am sending you a few sprays of ours for your inspection. You will see that No. 1 has thirty-four blooms, No. 2 has twenty-seven, No. 3 has fifty (one flower having been broken off), and last year fifty-one was our highest number on one shoot. The highest number of flowers is on a plant in a 10in pot, of *L. rosca albiflora*, there being thirty-two on a spray. Permit me to compliment Mr. Powell on his successful cultivation. I fully realise the amount of pleasure and satisfaction he, and also Colonel Brymer, must feel in looking on a well-cultivated and profuse flowering plant.—BENJAMIN CROMWELL, Cleveley Gardens, Allerton, Liverpool.

[Mr. Cromwell's heart would have warmed had he been able to observe the ecstasies of members of our office staff on our displaying the magnificent garlands of this exquisitely beautiful

climbing plant, on their receipt. Finer growths we have probably never seen, and, on counting the flowers, find that the numbers are as stated in our correspondent's letter. It would certainly be interesting to learn, through these pages, of the existence of other well-grown and floriferous *Lapagerias*, and the numbers of their flowers. Mr. Cromwell enclosed a handsome seedling, raised from two of his best forms. We make no reserve in saying that it is a decided improvement on the specific form, being more richly coloured, and both larger and heavier. It is well worth being attended to. This half-hardy Liliaceous twiner is a native of Patagonia, South America, and its coriaceous leaves, wiry stems, and fleshy flowers are typical of desert or dry land floras. The generic name was accorded in honour of Josephine Lapagerie, the first wife of Napoleon Bonaparte.—ED.]

### Red Spider and XL All.

After reading the very flattering remarks by my friend Mr. Easter on page 363, I feel, Mr. Editor, that I ought to give your readers an account of some experiments made some years ago, but related only to a few friends. It was in early autumn that I took charge of some vinceries and Peach houses, very badly infested with mealy bug and red spider, and my new employer told me they must be got clean. XL All was but little known at that time, so some of it was procured, and the early vinery was the first house to operate on, the foliage being just on the turn. The house was covered as far as possible with shading, and then the hose-pipe put on to thoroughly wet the top to make it stick and keep it as airtight as possible. About six o'clock the lamps were started, and fully one-half more compound used than the directions stated on the bottle, and the same dose at nine o'clock the same evening was given. In the morning we were surprised to find bug dead on the stages and floor. That night we repeated the two doses as before, the covering being left on for two days, while the hose-pipe was used to dislodge (?) as much as possible. I should have said that the second evening it rained all the afternoon and night, and on entering to trim lamps, &c., just before nine, the house was very full of vapour, and since then have found a wet night much more effective. The leaves on two Muscats were burnt very much, the others hardly touched; but no damage was really done to the canes, as they started next spring as usual.

By constant attention the bug was got rid of the same season, and by the time the fruit was ripe and cut red spider had not made any appearance. Peach houses were treated in the same manner when the leaves began to change colour, with the same good results. Orchids I always gave a second vapourising the same evening at the normal strength, without any damage being done. I advise keeping the blinds down the day after, using in all cases small fumigators, to have the vapour spread evenly over the house, and be careful to clean and scrape the bowls with a knife, so that no black sediment remains at bottom or sides, or much damage may soon be done. Vapourising every nine or ten days will do much to keep woodlice, ants, beetles, &c., in check, especially in spring, their breeding season. I see no reason why Mushroom houses should not be cleared in the same manner. I might add that we have never used any other compound but the one named, but feel sure that there are others good in the market, and just as effective as Mr. Kippis stated in his note on scab, which I was pleased to read. In conclusion, sir, I have a fancy for vapourising at six and nine, on account of having been told that a lot of insects come out to feed every three hours, namely, three, six, nine, and twelve; but there I must leave that point for some more able pen to explain.—T. T., Wakefield.

### Autumn Foliage in the Highlands.

Whatever season of the year the Highlands are visited, there is ample to exercise the imagination and interest the mind of the student of Nature. The dead of winter in those northern latitudes bespeaks its charms as forcibly as the genial warmth and sunshine of midsummer. The awe-inspiring mountains whose summits are lost in the clouds, robed in a mantle of several feet of snow, to the true artist and admirer of Nature is a sight no less worthy of his admiration than the blue and purple mountains clad in their summer vestments of Heath blossom. But, perhaps, at no period of the year does the face of Nature in any country call for general admiration so much as in the autumn, when the foliage is maturing from the trees, and nowhere in the whole kingdom could the changing tints be more full of splendour than they were a week ago in the greater part of the course of the Highland railway from Dunkirk to Daviot, near Inverness, and in the Highlands generally. In the vicinity of Carrbridge, Aviemore, &c., the white Birches, and Mountain Ash, Poplars, and the noble Scottish Pine combined to form a picture in the landscape difficult to rival in any country. The Birches, which are

abundant, were in all shades from green to a primrose-yellow; the Mountain Ash, deep red, Poplars an Italian-yellow, and all interspersed with the ultra-marine green (a shade to be seen nowhere but in the Highlands) of the young plantations of Scottish Pine. Around the seat of the chief of the Mackintosh, the scene was deeply intensified with the large sheet of water Loch Moy, on whose banks the historic residence Moy Hall stands. The Mountain Ash seem as the altitude increases to also increase in intensity of colour. In the vicinity of Kingussie and Kineraig the foliage was practically scarlet. For several miles on either side of the summit (which is 1484ft) trees of all kinds disappear, but on several occasions the roots of a primeval forest were seen exposed in the railway cuttings through the peat moss. These appeared to have been either cut or overcome by some disaster other than a gale, for the large roots sat in their original position, several feet below the present surface. Were they denuded by the influence of the moving icebergs of the ice age? The grass of Killierankie, perhaps, was among the finest of any of the scenes, for its grandeur of autumn foliage. Here the Oaks, Beeches, and Birches were exceedingly rich in tints. Oaks and Beeches were red, a tint seldom acquired in lower altitudes, and at Pitlochry the Oak coppice were almost scarlet, while the Spanish Chestnuts in the Dunkeld district were of a deep yellow hue. But alas! on leaving these higher altitudes and coming to the lower grounds between Perth and Glasgow, the general effect of woodland tints were dispiriting and gloomy. The trees were shedding their garbs in an apparent half-ripened condition, and those yet struggling for existence to the branches persisted in a dirty sickly green so unlike those we had been accustomed to see for the previous ten days.—D. C.

### Natural Reproduction of the Scottish Pine.

In a recent visit to the Beaully district of the North Highlands, my curiosity was very much attracted by a plantation of self-sown Scot's Firs. About thirty years ago this piece of land was a heath waste, on which a single seedling of Fir could not be seen, and now it is mostly covered with a plantation of singularly vigorous trees, rather above the average height and girth for that age. No one now living in the locality ever remembers of hearing of the place being at any time before under wood, and certainly there remains no signs in the soil, for several feet deep, of such being the case. "How did the Pines get there?" was the question I asked of an intelligent man of eighty-five years of age. "The woods at either end of the plantation are too far away for the seeds to blow over the whole area," I said to the man. "Well," said he, "as late as thirty years ago the Fir wood yonder contained a rather extensive rookery, and I remember how the rooks used to flock together in large numbers on this moor. At the time all the people supposed them to be feeding on stolen Potatoes from the crofters' allotments, but they probably were feeding on the seeds of the Fir cones taken hence from the wood, or, if not feeding on them, perhaps obeying one of Nature's great laws in helping to plant the seeds of the Pine."

"But allowing that either or both of these ideas are correct," said I, "how can you account for the regularity in which they sowed the seed, as the results now show?" My friend explained this by saying that the rooks did not confine themselves to one particular spot, but, on the contrary, were to be seen from time to time all over the heath. Some parts of this heath are exposed to the droughts of a summer's heat, and, though the soil conditions are not different, yet no Pines have grown at all on these parts; but where the Heather was long and the soil inclined to be seddened, the trees have grown with the vigour of Osiers. This would point to a very important fact in the artificial planting of Firs, namely, that moisture at an early stage of growth is not an undesirable thing for the successful growth of the Pine. The altitude of this self-sown plantation is not over 250ft above sea level, and the exposure is to the north.

I observed another instance, a few miles distant from this one, where the process of reproduction has been keeping pace with the axe of the woodman. The wood was planted after the last rebellion by the "Confiscated Estates Commissioners;" it would, therefore, be well over 100 years old thirty years ago, which age the rising forest appeared to be. Both these cases have given rise to a strong presumption in my mind that there is very probably a definite period in the age of the Pine when its seeds are better adapted for successful reproduction than at any other time, at least, that they are better able to overcome the hardships attending nature sowing. This period, I fancy, exists somewhere between the ages of eighty or 100 years. The altitude of this last wood is not over 200ft above sea level. It would be interesting to know from your sylvicultural readers what is the highest altitude at the present day that natural reproduction is taking place. I have an idea that our land has risen considerably since this process was universal in the higher mountains of Scotland, and that, therefore, it must be useless to expect Firs to grow again in many of the situations they flourished in the days of antiquity.—C.

## Societies.

### Royal Horticultural—Drill Hall, November 4.

Orchids and winter-flowering Begonias were prominent at Tuesday's meeting, while Messrs. Bull and J. Russell had nice grouplets of foliage plants; evergreens came from J. Waterer and Sons of Bagshot; and Chrysanthemums from Wells and Co., and Mr. Foster. Apples, too, were largely shown by Mr. Divers, and the Horticultural College, Swanley.

Hardy flowers were shown by Messrs. Barr and Sons, King Street, Covent Garden, who had Crocuses and autumn flowering Chrysanthemums chiefly; Messrs. Peed and Son, of West Norwood, brought Cattleyas and Cypripediums, together with Begonias Moonlight and Gloire de Lorraine var., Mrs. L. de Rothschild, the latter light pink, the former pale white. Mr. John Russell of Richmond contributed a group of exotic foliage plants, all of them exceedingly well grown. F. D. Lambert, Esq. (gardener, Mr. J. Fulford), Moor Hall, Cookham, contributed a creditably grown group of Turnford Hall Begonia.

Besides a group of Chrysanthemums in pots, Messrs. Wells and Co. staged cut blooms of Mrs. T. W. Pockett (a whole row of it), S. T. Wright, the new "gun"; W. R. Church, Mme. Herrewége, Matthew Smith, and a number of good unnamed seedlings.

Messrs. Harrison and Sons, Leicester, had an exhibit of Onions, including White Spanish, Harrison's Leicester Keeping, Rousham Park Hero, Nuneham Park, Banbury Cross, Bedfordshire Champion, Ailsa Craig, Excelsior, and Up-to-Date amongst others. The bulbs were fine, ripe, and of medium size, suitable for market and general purposes.

C. B. Gabriel, Esq., Easdale, Horsell, Woking (gardener, Mr. Calville), staged, in very good form, large bouquets of Zonal Pelargonium blooms. Amongst these were Mrs. G. Luizet, The Sirdar, Lady Curzon, Mark Twain, Mrs. Simpson, Lord Curzon, Mary Pelton, Herrick, Mary Beton, and Cerise, as the most telling.

Lady Warwick Hostel, Reading, sent bottled fruits.

Messrs. James Veitch and Sons, Limited, Chelsea, presented a gorgeous display of winter flowering Begonias, which occupied a table running almost the length of the Hall. Mrs. Heale was most conspicuous. Success, Julius, Ideala were also noteworthy, the table being edged with small Maidenhair Ferns; while Palms formed a good background.

Mr. James Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, arranged a few vases of Cactus Dahlias, which were undoubtedly good for such a late period.

Mr. H. B. May, Dyson's Lane Nursery, Upper Edmonton, contributed a seasonable display of winter flowering Carnations, which included Elma, America, Snowflake, Triumphans, Prince of Wales, and Resplendent, all of them tastefully displayed in masses of Ferns, Palms, Isclemis, and beautiful plants of Ficus repens variegata.

From Messrs. W. Bull and Sons, King's Road, Chelsea, came a choice exhibit of stove plants, in which Aglaonema costata, Nephthytis picturata, Dracaena Victoria, and Ceropegia Woodii were most conspicuous.

A creditable exhibit of Japanese Chrysanthemums was staged by Mr. P. R. Dunn, Caisteal Quath, Brockley Park, Forest Hill, all tastefully resting in a groundwork of Asparagus and Carex. Some of the best flowers were Mrs. Greenfield, Miss Hetty Dean, W. H. Webb, May Neville, Miss E. Fulton, Mrs. G. Mileham, Geo. Lawrence, and Master C. Seymour.

Mr. Robert Foster, Nunhead Cemetery, exhibited a large semicircular group of Chrysanthemums, beautifully arranged with Ferns and other foliage. The exhibit included all sections, the Japanese, Anemones, and pompons being most conspicuous, while a few cut blooms were arranged round the front of the group.

Messrs. John Waterer and Sons (Limited), Bagshot, Surrey, arranged a number of coniferous plants and Hollies on the floor in the centre of the hall; each were perfect specimens, clean and bright. The Hollies were well berried. Some of the best were Sciadopitys verticillata, Retinespora pisifera aurea, R. obtusa alba, R. plumosa argentea, and Thuja occidentalis aurca.

Messrs. Sutton and Sons, Reading, exhibited a good bundle of Rhubarb, "The Sutton," of good colour, grown in the open air without protection.

Amongst those showing Orchids were Messrs. Charlesworth and Co., Heaton, Bradford, with well flowered pieces of Sophro-Cattleya Nydia, Cattleya Portia, L.-c. Ingrani, L.-c. La France, Cattleya Mrs. J. W. Whiteley, C. Iris, Cypripedium insigne Sanderæ, &c. Sir Trevor Lawrence, Bart., staged a Cattleya labiata spray, with four huge flowers, and received a cultural commendation.

Messrs. James Veitch and Sons, Limited, staged a very bright exhibit of Orchids, including Cattleya Portia, five flowers per sheath; C. Mrs. J. W. Whiteley (four flowers); C. Ella; L.-c.



*Dominiana Langleyensis* L.-c. Bryan, L.-c. Gotteiana, C. Mantini, and some fine *Cypripediums*.

Captain Holford, C.I.E. (grower, Mr. Alexander), from Westonbirt, Tetbury, brought two splendidly flowered *Vanda Kimballiana*, *C. labiata*, with five strong flowers on a sheath, *Vanda Sanderiana*, *Dendrobium Phalaenopsis Holeleucum*, *D. formosum giganteum*, and *C. Ariel*, all of them exceedingly well grown.

J. Bradshaw, Esq. (gardener, Mr. G. G. Whitelegg), The Grange, Southgate, N., was forward with *Cattleya labiata*, and hybrids and varieties of it. *C. aurea* was very well shown. *C. labiata* Pride of Southgate was very fine. Sir F. Wigan, Bart., sent *Pleione Walliehi*, with a mass of flowers; *Odontoglossum spectabile*, with eleven flowers; *Cymbidium Traayanum*, with seventeen flowers, and other well grown Orchids in variety.

From Hugh Low and Co., Bush Hill Park, Middlesex, came *Cypripedium insigne Sanderæ*, *Cattleya labiata Amesiana*, with four soft white flowers, very beautiful; and splendid pieces of *Oncidium varicosum*. J. Gurney Fowler, Esq., Glebelands, South Woodford, sent *Dendrobiums* and *Cattleyas*, making a mass of flower; while from Messrs. Sander and Sons, of St. Albans, a group of the rarer hybrids was sent. They had *Cypripedium Coronis*, with a large and beautiful dorsal sepal, white edged; *C. coneolor nitens*, charmingly slender and sweet; *C. Zenobia*, a large and handsome brown pouched variety; *C. Evelyn Ames superbum*; and *C. Hiawatha*.

C. H. Feiling, Esq. (gardener, Mr. C. Hocking), Southgate House, Southgate, contributed a group of the best *Cypripediums*, all especially well grown; and Jeremiah Colman, Esq. (gardener, Mr. W. P. Bound), Gatton Park, Reigate, sent profusely flowered *Cattleyas*.

Messrs. J. Veitch and Sons, Limited, Chelsea, staged two bunches of *Rhubarb Topp's Winter*, the stems of good length, and bright in colour. Also a grand Raspberry named November Abundance, a cross between *Catavisa* and *Superlative*, which displayed large bunches of ripe and green fruits.

From Mr. W. Messenger, Wolverton, Norwich, came good dishes of *Plums Wyedale* and *Wolverstone Orange*.

Mr. W. H. Divers, gardener to the Duke of Rutland, Belvoir Castle, Grantham, staged a large collection of Apples and Pears, which were well developed samples, the Apples being large and in many cases highly coloured. Some of the best Apples were *Dowdney's Seedling*, *Gascoigne's Scarlet*, *Baumann's Red Reinette*, *Sandringham*, *Blenheim Pippin*, *Emperor Alexander*, and *Warner's King*. The Pears were represented by good examples of *Emile d'Heyst*, *Doyenné du Comice*, *Marie Louise d'Uccle*, and *Beurré d'Anjou*.

From the Horticultural College, Swanley, came a large exhibit of fruit and vegetables, displayed with *Vine* and *Ampelopsis* leaves. *Warner's King*, *Peasgood's Nonesuch*, *Cox's Orange Pippin*, *King of Pippins*, and *Bismarck* were amongst the best Apples; while good examples of Pears were *Beurré Diel*, *Louise Bonne de Jersey*, *Beurré Clairgeau*, *Beurré Hardy*, and *Duchesse d'Angoulême*. The vegetables contained some large Leeks, good Student Parsnips, Dobbie's Matchless Turnips, and Savoy.

Mr. H. Becker, Caesarean Nurseries, Jersey, exhibited thirteen fruits of *Pear Belle de Jersey*, weighing thirty-two pounds three and a half ounces. Needless to say, they were veritable monsters, reminding one of a decent Mangold Wurtzel. The largest fruit weighed three pounds eleven ounces.

Mr. A. McKellar, gardener to His Majesty the King, Windsor Castle, staged fourteen Pines in splendid condition and of enormous size, the weights were not given, but they were exceedingly heavy, probably some weighing seven or eight pounds.

A nice fresh box of *Strawberry St. Joseph* came from Mr. A. W. Sutton, Bucklebury Place, Woolhampton, Berks.

Mr. H. Perkins, gardener to the Hon. W. F. D. Smith, M.P., Henley-on-Thames, sent *Strawberry St. Joseph* in pots and boxes. The pots were well fruited, and a capital addition to the dessert table in November.

From Mr. J. H. Goodacre, Elvaston Castle, came bunches of *Diamond Jubilee*, *Imperial Black Seedling*, and *Black Morocco* Grapes. The *Diamond Jubilee* were best in colour and berry.

#### Medals.

FRUIT COMMITTEE.—Silver Banksian Medal to Mr. Henry Perkins, Greenlands, for Strawberries; to Miss Edith Bradly, for collection of bottled fruit; to Harrison and Sons, Leicester, for collection of Onions; to Mr. Becker, Jersey, for Pears. Silver Knightian to Mr. C. Herrin, Swanley, Kent, for collection of fruit and vegetables. Hogg Medal, H.M. the King for fourteen Pine-apples; to Duke of Rutland, The Gardens, Grantham, for Apples and Pears. Cultural Commendation to Arthur Sutton, Berks, for *Strawberry St. Joseph*.

FLORAL COMMITTEE.—Silver-gilt Flora for group of *Chrysanthemums* to Messrs. W. Wells and Co., Redhill; Silver-gilt Banksian for winter flowering *Begonias* to Messrs. J. Veitch and Sons, Limited, Chelsea; Silver Flora for *Carnations* to Mr. H. B. May, Upper Edmonton; for *Zonal Pelargoniums* to Mr. G. B. Gabriel, Woking; Silver Banksian for foliage plants to Mr. J.

Russell, Richmond; for *Conifers*, &c., to Messrs. J. Waterer, Bagshot; for *Chrysanthemums* to Mr. Forster, Nunhead; for cut *Chrysanthemums* to P. R. Dunn, Esq., Brockley Park, Forest Hill.

ORCHID COMMITTEE.—Messrs. Veitch received a Silver Flora C. H. Feiling, do.; Sander and Sons, do.; also Silver Banksian to Sir F. Wigan, Bart.; Capt. Holford, J. G. Fowler, Esq., and H. Low and Co.

#### Certificates and Awards of Merit.

*Apple, Tamplin* (Mr. Basham, Newport).—In appearance, much like the *Crimson Costard*. (Award of Merit.) From Fair Oak Nurseries, Newport, Mon.

*Carnation, Duchess of Portland* (Mr. W. J. Godfrey and Messrs. Cutbush & Sons).—A very free-flowering and fragrant tree, with long stalks, goodly sized flowers of a blush-pink colour, the edges of the petals fringed, and the flower very fragrant. (Award of Merit.)

*Cattleya labiata Amesiana* (J. Bradshaw, Esq., and H. Low & Co.).—A beautiful white variety with broad sepals and protruding lip, nicely fringed and tinted mauve lip. (Award of Merit.) From The Grange, Southgate, N. (gardener, Mr. Geo. Whitelegge), and Bush Hill Park, Middlesex.

*Cattleya* × *Mrs. Pitt* (H. T. Pitt, Esq.).—Parentage, *C. Harrisoniæ* × *C. aurea*. The lip is orange yellow, with pale edge. The sepals and petals are rose-mauve. A stout strong flower. (Award of Merit.) From Stamford Hill.

*Chrysanthemum, Harry Shrimpton* (W. Seward).—A large and massive Jap., russety red above, and old gold beneath. (Award of Merit.)

*Chrysanthemum, Mrs. J. Seward* (W. Seward, Hanwell).—A rich, golden bronze incurved variety. (Award of Merit.)

*Chrysanthemum, S. T. Wright* (Wells & Co., Ltd.).—One of the finest for 1903. Flowers large and strong, petals broad, smooth, well turned back, central ones incurving and showing gold-bronze reverse, and coloured intense crimson-plum. A Jap. (Award of Merit.) From Earlswood Nurseries, Redhill.

*Cypripedium* × *Thalia* (Jas. Veitch & Sons, Ltd.).—Parentage, *C. insigne Chantini* × *C. Baron Schröder*. Beautifully coloured on pouch, petals and sepals with brown, the dorsal sepals with greenish base and white top edges. A very handsome compound hybrid. (Award of Merit.)

*Grape, Imperial Black Seedling* (Mr. J. H. Goodacre).—In appearance like *Black Morocco*, and coloured dark plum. The bunch was a poor one, and we were unable to taste the fruits. (Award of Merit.) From Elvaston Castle, Derby.

*Oncidium Mantini superbum* (F. Wellesley, Esq.).—A large flowered, richly coloured variety; very attractive. Blotched and spotted with deep brown over deep golden yellow. (Award of Merit.) From Westfield Common, Woking.

*Raspberry, November Abundance* (Jas. Veitch & Sons, Ltd.).—A red fruited variety, very free and of good size. (Award of Merit.)

*Rhubarb, Topp's Winter* (J. Veitch & Sons, Ltd.).—A slender stalked, bright crimson-coloured [*Rhubarb*, likely to be good for very late use. (Award of Merit.)

#### National Chrysanthemum, Nov. 4, 5, and 6.

The last of the November shows of this Society was successfully held in the Royal Aquarium, Westminster, on the dates given. The exhibition was as varied as any that have been seen in recent years, and while no one feature was less interesting than hitherto, some of them were decidedly more so. The trade exhibits were highly entertaining, on account of the novelties therein included, and of these we have something to say in another part of this report. A selection of the best flowers on view in our estimation would comprise, among the incurved, *Mrs. R. C. Kingston*, *Globe d'Or*, *Pearl Palace*, *King of the Yellows*, *Mme. Vernieul*, *E. Cannell*, *Duchess of Fife*, *Topaze Orientale*, and *C. H. Curtis*; while the leading Japs in the show were found in *Florence Molyneux*, *Mrs. G. Mileham*, *W. R. Church*, *Mrs. A. R. Knight* (Matthew Smith style) *Australie*, *Mrs. Barkley*, *Sensation*, *Miss Alice Byron*, *Mme. Paola Radaelli* (good), *Mme. Herwege*, *Mr. L. Remy*, *Bessie Godfrey*, *Lord Ludlow*, *Mme. Waldeck-Rousseau*, *Mrs. F. W. Vallis*, *Nellie Pockett*, *Mme. Von Andre*, *E. Molyneux*, *Master C. Seymour*, *J. R. Upton*, and *Godfrey's Pride*.

In the group class Mr. N. Davis was again placed first, and Mr. R. C. Pulling second. Mr. F. S. Vallis was at the head of seven entrants for the forty-eight distinct Japs, with blooms that had been dressed to the last petals, rendering some of the flowers quite out of character, yet perfect, from the florist's or expert's point of view. Such elaborate dressing gives the ordinary grower a false impression of the varieties, and causes him to wonder why his flowers never come like those shown on such stands as Mr. Vallis's. An expert manipulator of the tweezers may also score a large number of points over really a better grower, though we do not at all infer that Mr. Vallis is not both a good grower and an able exhibitor. Mr. Molyneux's remarks in the *Journal* this week, on "Manipulating the Petals," will be read with interest in this connection. The second place in the forty-eight went to Mr. R. Kenyon, of Woodford Green; and third, Mr. A. Jefferies, Meor Hall, Harlow. For the

twenty-four, Mr. W. Mease, of Leatherhead, beat Mr. H. Perkins, of Greenlands.

Plants trained as formal specimens were up to the usual, and here the chief prizewinners were Mr. E. Easey, of Highbury New Park; Mr. F. Gilbert, of Blackheath; and Mr. F. Gilks, of Ponders End. The floral decorations in the galleries seemed more varied than usual, though, even good as they were, an Edinburgh florist severely criticised them. Mr. L. H. Calcutt, of Stoke Newington, led in class 31 for a table of memorial wreaths, anchors, &c., having a huge bell in white Chrysanthemums, and crown beneath it of a yellow variety, the whole being surmounted by an overhead erection, supported by four pillars, and all swathed in flowers. It was too heavy. Messrs. H. Marsh and Son, of Brixton, S.W., came second with Roses, Chrysanthemums, Cattleyas, &c., in their designs; and third, Messrs. Harward Bros., of Balham.

Fruit did not figure largely in the competitive classes. For three bunches of black Grapes, in class 63, Mr. A. B. Wadds, of Paddockhurst, Crawley, led, and Mr. W. Taylor, of Tewkesbury Lodge, came second. Mr. J. Lock, of Weybridge, was first for Muscats, followed by Mr. W. Lintott, of Marden Park, Surrey; while for Gros Colmans, in class 64, Mr. W. Chuck, of Broadsworth Hall, Doncaster, with splendid samples, was premier, and Mr. Taylor again second.

Some shapely vegetables were contributed. Mr. Beckett was a capital leader, out of six, for a collection of nine kinds, grown from seeds supplied by Messrs. Webb and Sons. Messrs. A. Basile, W. L. Bastin, Chas. Brown (Abbot's Langley), and James Hall, of Wells, Somerset, were placed in this order. The first prize was £5. For Mr. Robt. Sydenham's vegetable competitions, the following were the prizewinners: Messrs. A. G. Gentle, R. A. Horspool, A. Basile, J. Hall, R. Lye, C. Brown, and Silas Cole, whose names were each frequently seen on the cards. The first named, who is gardener to Mrs. Denison at a place in Herts, won Mr. Sydenham's Challenge Cup, valued at 15 guineas, for the third time, with an aggregate of fifty-two points, and the cup now becomes his property.

Mr. R. Dean, as secretary to the society, had his hands full.

The following Medal Awards were accorded to non-competitive exhibitors: Mr. H. J. Jones, large Gold; Hobbies, Limited, Gold; H. Cannell and Sons, Gold; W. J. Godfrey, Gold; T. Rochford and Sons, Limited, Gold. Silver-gilt Medals to W. Cutbush and Son; Daniels Bros., Norwich; J. Spink, Walthamstow; W. and J. Brown, Peterborough and Stamford; B. S. Williams and Son; and J. Hill and Son, Edmonton. Silver Medals to G. Boyes, Leicester, and J. Laing and Sons, of Forest Hill.

The display made by the decorated fountains was most imposing. Each exhibitor has half of each fountain, and while making a grand feature, it gives the competitors great scope for displaying their artistic taste. The prizes, which are given by the president, Sir Albert Rollit, M.P., are sufficient to attract our best exhibitors. On this occasion there were three competitors. The first honours fell to Mr. Norman Davis, Framfield, who certainly made the most of his opportunities. Apart from the Chrysanthemums, a great wealth of foliage was employed, both as plants and in a cut state. Palms, Dracenas, Crotons, Asparagus, Ferns, and Smilax were liberally employed, and with good taste. The Chrysanthemums, however, were beautiful, Madame P. Radaelli, Duchess of Sutherland, George Lawrence, Madame W. Rosseau, Calvat's Sun, Miss Mildred Ware, and Madame Carnot being especially fine. Mr. R. C. Pulling, Monkham's Nurseries, Woodford Green, made a grand second, and his exhibit was certainly conceived in bolder style. Huge pyramids of Mrs. Barkley and W. R. Church were grand, while most of the other flowers employed were fit for the exhibition tables. The foliage was also employed tastefully, and the exhibit must have been remarkably close to the first prizewinner. The third position was awarded to Mr. Jas. Lock, gardener to the Hon. Mr. Justice Swinfen Eady, Weybridge, who certainly made a good, vigorous exhibit, which possessed plenty of character in design, and was well carried out in the best decorative style.

#### Plants.

The competition for six bush specimens, large flowered varieties, only brought out one exhibit, that from Mr. W. Noble, gardener to H. J. Pitt, Esq., Rosslyn, Stamford Hill, who had good plants of Lady Hanham, Vivian Morel, and Phœbus.

Class 3 was for four trained specimen plants, any varieties, only brought out one entry. Mr. E. Easey, gardener to F. Bishop, Esq., The Grange, Highbury New Park, was the only competitor, and was deservedly awarded the first prize; his varieties were Miss Watson, Colonel W. B. Smith, President Nonin, and Commandant Blussett.

The trained pompons brought out two good exhibits, the first prize being taken by Mr. F. Gilbert, who had four large plants well flowered with beautiful foliage; his varieties were Toussaint Maurisot, Wm. Westlake, Abre de Noël, and Pygmalion. Mr. F. Gilks was second with more closely trained plants; his best plants were Nellie Rainford and Rosinante.

For one specimen plant, any variety, there were four entries, the first prize being awarded to Mr. E. Easey, gardener to F. Bishop, Esq., The Grange, Highbury New Park, for a grand plant of Miss Watson, simply covered with its bright yellow flowers. Mr. F. Gilbert, gardener to M. N. Buttershaw, Esq., Kendal House, Blackheath Park, was second with Rosinante, a pink pompon; while Mr. F. Gilks, gardener to F. W. Freir, Esq., Bylock Hall, Ponders End, was third with La Triomphante.

#### Challenge Trophy.

The Challenge Trophy for Chrysanthemum societies is always one of great interest, and excites keen competition. It is rather a tall order to produce forty-eight Japanese and twenty-four incurved blooms, but it is always done with credit to the societies, and the additional prizes of £10, £6, and £4 to the winners ensure good competition as a general rule; but on this occasion only one society staged, the Epsom and District Society, and the exhibitors were Mr. G. Hunt and Mr. W. Higgs. The exhibit was undoubtedly a strong one, and would have stood high had there been a competition, the varieties were, Japanese: Florence Molyneux, Mrs. Geo. Mileham, Matthew Smith, Pride of Madford, Mrs. W. Popham, Marquise V. Venosta, Mrs. H. Weeks, Mafeking Hero, Mrs. J. J. Thornycroft, Mermaid, Mr. T. Carrington, Miss E. Fulton, W. R. Church, Jane Molyneux, Rev. W. Wilks, Madame Herrewége, Mrs. C. H. Payne, Mr. L. Remy, Calvat's 99, Mr. G. Carpenter, Mrs. Hummell, Swanley Giant, Mrs. Greenfield, and Australia. The incurved varieties were Duchess of Fife, Pantia Ralli, Countess of Warwick, Mrs. W. Howe, Topaze Orientale, Globe d'Or, Lady Isobel, Ialene, Nellie Southam, Edith Hughes, Miss Doris Cox, Mr. R. C. Kingston, Dorothy Foster, Ernest Cannell, Miss R. Hunt, Chas. H. Curtis, Louisa Giles, Robert Petfield, J. Agate, Madame Durandal, Golden Empress, Pearl Palace, Hanwell Glory, and Dome d'Or.

#### Cut Blooms.

The premier class for incurveds is represented by thirty-six distinct, and there were three exhibitors who faced the judges. This and the following class are for the Holmes Memorial Challenge Cups. Here Mr. W. Higgs scored first prize with a strong, even stand. His varieties were, back row: Mrs. C. Crooks, Frank Hammond, Major Bonaffon, Mr. R. C. Kingston, George Lock, Topaze Orientale, The King, Lady Isobel, Robert Petfield, Ernest Cannell, Duchess of Fife, and Nellie Southam; middle row: Ialene, J. Agate, Miss Doris Cox, George Haigh, Cecil Cutts, Wm. Higgs, Comtesse de Estoile, Countess of Warwick, Lord Alcester, Madam Vernieul, Madame Durandal, and Chas. H. Curtis; front row: Edith Hughes, Violet Foster, Globe d'Or, John Lambert, Pearl Palace, Golden Empress, Hanwell Glory, Louisa Giles, Creole, King of the Yellows, Empress of India, and Dome d'Or. Mr. G. J. Hunt made a good bid for second place, his best blooms being Ialene, Violet Tomlin, Baron Hirsch, Chas. H. Curtis, and Duchess of Fife; and Mr. W. Mease third.

The competition for the forty-eight varieties was exceedingly keen, there being no less than seven competitors, the first place being awarded to Mr. F. S. Vallis, Broomham Fruit Co., Chippenham. His blooms were undoubtedly grand in size and colour. The varieties were, back row, reading from left to right: Mon. Waldeck-Rosseau, Kimberley, Mrs. J. Bryant, Madame Herrewége, Phœbus, Mrs. R. Darby, Madame Phillippe Rivoire, Mrs. B. Wyld, Marquis V. Venosta, Madame P. Ralli, Matthew Smith, Australia, F. S. Vallis, Chas. Longley, Mrs. J. Lewis, and Ed. Molyneux; second row: Mrs. Barkley, Duchess of Northumberland, Mrs. T. W. Pockett, Lily Mountford, W. R. Church (grand), Madame Carnot, Mrs. G. Golder, Seedling, Le Grand Dragon, Mr. T. Carrington, Mrs. Greenfield, Henry Weeks, Nellie Bean, Miss Alice Byron, Seedling, and G. J. Warren; front row: Duchess of Sutherland, Mrs. F. W. Vallis, Mrs. G. Mileham, Mrs. H. Weeks, Bessie Godfrey, Pride of Madford, Mons. Chenon de Leché, Mrs. E. Hummell, Mrs. Mease, Sensation, Nellie Pockett, Henry Stowe, Ethel Fitzroy, Mrs. Coombes, Mons. L. Remy, and Calvat's 99. Mr. R. Kenyon, gardener to A. F. Hills, Esq., Monkham's, Woodford Green, made a bold bid for second place. His best blooms were W. H. Whitehouse, Le Grand Dragon, Lord Alverstone, Miss Elsie Fulton (grand), Mrs. W. Popham, Madam Von Andre, Mrs. Barkley, and Mafeking Hero; and Mr. A. Jeffries, gardener to John Balfour, Esq., Moor Hall, Harlow, was third with a good display, while Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, was fourth.

The Great Vase class is now so well known as one of the chief attractions at the National Show that no wonder there should be such a grand display. The schedule reads twelve vases of five blooms each, one variety to each vase. The latter are provided by the Society, and are uniform throughout. The prizes start at £20, and drop in fives until the unit is reached. Four exhibitors competed, Mr. F. S. Vallis once more coming out the victor; but the blooms did not strike one as being up to the average of those last year. The varieties employed were



Madame Herrewége, Mons. Chenon de Leché, Australie (grand), Mrs. Mease, W. R. Church, Calvat's '99, Le Grand Dragon, Madame Carnot, Mrs. Barkley, M. L. Remy, Edwin Molyneux (as good as ever), and Mrs. J. Lewis. Mr. Chas. Beckett, gardener to Sir W. G. Pearce, Bart., Chilton Lodge, Hungerford, was a good second, the varieties employed being Madame P. Radaelli, Loveliness, Mrs. J. Bryant, Miss Alice Byron, Sensation, Madame Carnot, Mrs. Coombes, Mrs. Mease, Godfrey's Pride, Mrs. H. Weeks, J. R. Upton, and Mrs. Barkley. Mr. W. C. Meredith, gardener to G. Wilder, Esq., Stanstead Park, Emsworth, was third, and Mr. Geo. Williams, Manor House Nursery, Cardiff, fourth.

Class II was for twenty-four blooms, distinct, and a grand entry of eleven exhibitors staged in a truly strong class. Mr. H. Perkins scored first, his varieties were Henry Perkins, Edith Smith, General Buller, Australie, George Lawrence, Mrs. J. Bryant, Graphic, W. H. Whitehouse, Mrs. J. C. Neville, Vicar of Leatherhead, Mrs. J. Cleeve, Earl of Harrowby, Lady Mary Conyers, Edith Tabor, Mrs. G. Mileham, Lady Aeland, Mary Perkins, W. R. Church, Countess of Harrowby, Viscountess Cranbourne, Mrs. R. Darby, Countess of Arran, Mrs. J. W. Barks, and Madame Herrewége; Mr. W. Mease followed with nice blooms of George Lawrence, Mrs. J. C. Neville, Florence Molyneux, Mafeking Hero, Mr. L. Remy, and J. R. Upton, while Mr. Alex. Smith, gardener to the Lady Superior, The Convent, Roehampton, was a nice third; and Mr. A. Jefferies fourth.

The boards for twelve blooms, distinct, proved an attractive one for exhibitors, there being no less than fifteen competitors faced the judges. The first honours going to Mr. H. Perkins, gardener to the Hon. W. F. D. Smith, Greenlands, Henley-on-Thames, who had a strong beard of blooms, the varieties being Henry Perkins, Australie, George Lawrence, Lady Mary Conyers, Mrs. J. Cleeve, Mrs. W. Popham, Mrs. J. Bryant, Phœbus, Mrs. J. C. Neville, W. R. Church, Madame Herrewége, and Mrs. G. Mileham. Mr. George Hewitt, gardener to C. E. Green, Esq., Theydon Grove, Epping, followed with good blooms of W. R. Church, Mons. Chenon de Leché, Mrs. Mease, and Mrs. Barkley. Mr. W. L. Bastin, gardener to Sir Alex. Henderson, Bart. M.P., Buscot Park, Farringdon, was third, and Mr. G. Impey, gardener to H. Mansfield, Esq., New Barnet, brought up the rear.

For a vase containing six blooms of any white Japanese variety there were seven entries. Mr. W. Mease winning first prize with a good vase of Princess Alice de Monaco. Mr. W. C. Meredith came next with a good display of Madame Gustave Henry, Mr. J. Sandford was third with the same variety, and Mr. C. Lane, gardener to E. H. Coles, Esq., Caterham, brought up the rear with good Miss Alice Byron.

A similar class for six yellow blooms produced six entries. Mr. H. Perkins taking first position with a glorious vase of Viscountess Cranbourne; Mr. Charles Edwardes, gardener to H. W. Peal, Esq., Ealing, was second with rich blooms of R. Hooper Pearson. Mr. Lane came next with Mrs. W. Mease, and Mr. H. Parr, gardener to F. A. Bevan, Esq., Trent Park, New Barnet, was fourth with Edith Tabor.

All the other colours were lumped together in one class, and six exhibitors staged, the first prize going to a grand vase of Mrs. Barkley from Mr. A. Jefferies; Mr. H. Perkins was a good second with Australie; while Mr. G. Hewitt was third with beautifully coloured W. R. Church, and Mr. W. L. Bastin was fourth with Mrs. G. Mileham.

The hairy petalled varieties were exhibited in a vase containing six blooms in not less than two varieties, but, sad to relate, only two entries were made, Mr. Henry Love, Sandown, Isle of Wight, being first with a fair vase containing Princess Henry, Louis Boehmer, and a seedling; and Mr. S. Foster, gardener to R. Nivison, Esq., Hendon, followed with Mrs. D. Ward, Hairy Wonder, and King of Hirsutes.

A most interesting class was that for six vases of incurved blooms in six distinct varieties of five blooms each. Those who deprecate the incurved blooms as being unsuitable for decorative purposes had an object lesson here, which would, no doubt, cause them to alter their opinion. There were three exhibits, and the champion, Mr. W. Higgs, gardener to J. B. Hankey, Esq., Fetcham Park, Fetcham, added to his honours by taking the blue ribbon once more, with a superb exhibit. His varieties were Robert Petfield, Mrs. R. C. Kingston, Hanwell Glory, Lady Isobel, Nellie Southam (superb), and Charles H. Curtis. Mr. G. J. Hunt, gardener to P. Ralli, Esq., Epsom, was second with good vases of Mrs. W. C. Egan, Globe d'Or, Chrysanthemiste Bruant, and Empress of India. Mr. W. L. Bastin came in third with Lady Isobel, Hanwell Glory, and Baron Hirsch as his best examples.

For twelve blooms incurved, distinct, there were nine entries. Mr. W. Higgs again taking the premier award with a nice even board. The varieties were Topaze Orientale, Ernest Cannell, Madame Durandal, Duchess of Fife, Lady Isobel, Nellie Southam, J. Agate, Ialene, Golden Empress, Globe d'Or, Robert Petfield, and Charles H. Curtis. Mr. W. L. Bastin was a good level second, his best blooms being Lady Isobel, J. Agate, Duchess of Fife, Baron Hirsch and Dorothy Foster. Mr. C. Lane was third, and Mr. Charles Edwardes fourth.

Class 19 was for six blooms incurved, one variety only, and there were eight exhibits, Mr. W. Mease securing the premier place with a good exhibit of Topaze Orientale, Mr. Charles Crooks, gardener to the Dowager Lady Hindlip, Droitwich, being second with Duchess of Fife, and Mr. J. Sandford third with Charles H. Curtis.

A market growers' class was provided for six varieties, such as are grown for market, six sprays to form a bunch, not disbudded, exhibited in vases. There were three competitors, who would have made a sorry display in market. Where are the growers? The first prize was allotted to Mr. J. R. Allen, gardener to C. A. Morris Field, Esq., Tunbridge Wells, who staged Mons. E. V. Freeman, Mrs. Wingfield, Soleil d'Octobre, Mychett Beauty, Crimson Pride, and Notaire Glory. Mr. H. Parr was awarded second; and the other was evidently not deemed worthy of a prize.

There was only one class for the reflexed varieties; twelve blooms, not less than nine varieties. Here there were only two exhibits, the first prize being awarded to Mr. T. Caryl for a moderate board. His varieties were Dorothy Gibson, King of Crimsons, Pink Christine, Mrs. Forsyth, Golden Christine, Phidias, Cloth of Gold, Cullingfordi, Miss F. Lunn, and Cloth of Gold. Mr. Charles Brown was second.

For twenty-four large flowered Anemone C's, Japanese included, distinct, there was only two exhibits from Mr. Charles Brown, who staged good blooms of Delaware, Descartes, Mabel Miller, Mrs. Judge Benedict, and Gluck. Mr. A. Page was a good second with good examples of Descartes and Mons. Panckoucke.

The elder type of Anemones were arranged in vases, six blooms in each. Here Mr. Charles Brown was again first with two pretty vases, followed by Mr. A. Page.

A similar class was provided for the Japanese Anemones, which brought out three exhibits. The first prize was awarded to Mr. Charles Brown, gardener to R. Henty, Esq., Langley House, who had good blooms of Owen's Perfection, John Bunyan, Madame Lawton, and Sir W. Raleigh. Mr. J. Barrance, gardener to G. W. Taylor, Esq., Hadley Bourne, Barnet, was a close second; and Mr. A. Page, gardener to G. W. Kilner, Esq., Ravenscroft, North Finchley, brought up the rear.

Five entered in class 28 for prizes offered by Mr. W. J. Godfrey, the flowers to be selected from the Exmouth novelties of 1901 and 1902. These collections were, without doubt, the most richly coloured in the show, most of the blooms being either crimsons, bronzes, or rich deep yellows. Mr. Kenyon led for 12, followed by Mr. C. Ritchings, gardener to the Misses Baird, St. James', West Malvern; and Mr. C. Beckett, gardener to Sir W. G. Pearce, Bart., Chilton Lodge, Hungerford, in this order; five competing. The best blooms from the foregoing were Godfrey's Pride, H. E. Hayman, Sensation, Loveliness, W. E. Vowden (a bronzy incurving Jap), and Exmouth Crimson. Mr. A. Jefferies, of Moor Hall, led, and Mr. A. Shipway followed for a vase of three of the Exmouth novelties.

We have already referred to the prizewinners in class 31, for a table of floral designs, and would add that the prizes were offered by Mr. J. T. Simpson, his friends, and market growers of flowers. The succeeding class, for three epergnes of Chrysanthemums and suitable foliage, brought out seven sets, making twenty-one epergnes. Mr. J. French, gardener to Mrs. Barclay, Ambleside, Wimbledon Park, was placed first; Miss C. B. Cole, Feltham, second; and Mrs. Green, of Harold Wood, third.

AMATEURS' CLASSES.—A fair show was made in this section. For eighteen Japs, Mr. J. Childs, The Priory, Totteridge, was first; Mr. A. Page, North Finchley, second; and Mr. C. H. Martin, Raymead, I.W., third, there being only three sets. Five entered for the twelve, the winners being Mr. M. Rayment, of Romford; Mr. L. Gocch, South Norwood; and Mr. A. Page, placed thus. Class 39, for the six Japs, brought up ten entrants, and here Mr. A. Robertson, of St. John's Wood, was first; Mr. H. Pestell, Bedford, second; and Mr. J. Childs third. For six of one variety, Mr. A. Robertson led with W. R. Church. The incurveds were poor.

The usual disappointing display of decorative Chrysanthemums, in competition for Mr. Percy Waterer's Silver Challenge Cup (class 45), was presented as a feature on this occasion. We should like to see these classes much more enlarged, so that truly representative groups might be seen, and the section is worthy of more consideration in point of space allowed. Four entrants were forward, the prizes falling to Messrs. D. B. Crane, of Highgate, with a bright lot, but poorly staged, as were those of the others—to wit, Percy L. Johnson, North Gate, Bishops Stortford, second; and A. Taylor, of East Finchley, who came third.

In class 46, for a very similar display, Mr. Crane again led, and Mr. A. Taylor was second, there being no other exhibitor.

For the twelve distinct Japs in class 48, an even board was set up by Mr. M. Silsbury, of Providence, Shanklin, Isle of Wight, though some of them could have been more fully developed. However, they were easily first. A handsome flower of Sunshine was included. This is a massive flower, with plenty of material in it, the florets drooping but turned up at the tips, and coloured rich ruddy gold. He also staged a good bronzy-red seedling of great breadth of petal, and other flowers not often seen at

their best. The second place fell to Mr. Geo. Heal, Holly House, Compton, with very fair flowers, but loosely built, except Hero of Omdurman. Lord Ludlow was very deeply coloured, and a little out of character. Mr. F. Sharpe was third, having a rich R. Hooper Pearson, which seems too intensely coloured to go well with other flowers. This class brought forth nine contestants, who staged an aggregate of 108 blooms, the first being only a Silver Medal and 20s.

For three Japs distinct the forewinner was Mr. P. Towers West Hambleton, Henley-on-Thames, with three novelties—W. R. Church, Earl of Arran, and Geo. Lawrence. Mr. F. Wheatley, of Thames Street, Weybridge, was second. For six Japs, distinct, Mr. F. Wheatley staged large and well-built flowers; Mrs. Pockett and Mrs. G. Mileham, being good; and also Nellie Pockett. For a dozen incurved blooms in class 51, Mr. T. Sharpe, of Greenhithe, was placed first, but had a very ragged set, Miss A. Hills and Topaze Orientale being fair blooms, but requiring to be dressed. Mr. Sharpe's six in three varieties, class 50, were creditable, though too ragged, except Royal Standard, which was almost perfect.

Class 60, for a vase of six blooms of any Jap, arranged with foliage, resulted in a keen competition, nine staging. Mr. E. Jones, of 51, Bower Street, Bedford, was deservedly first with good blooms, assisted by purple Oak sprays and green Chrysanthemum foliage; Mr. C. H. Martin, Raymead, Hendon, was an excellent second; and third, Mr. A. Robertson, of St. John's Wood. In class 35, for a vase of six blooms, one variety, the honours fell to Mr. H. Perkins, of Greenlands; and Mr. H. Parr, of Trent Park, second. Mr. F. A. Coote, Bechfield, Weybridge, was a poor third. Four entered. For two vases of pompons only a couple of entrants were forward, Mr. W. C. Pagram, of The Whin, Weybridge, being first, with a nice fine arrangement; and Mr. W. Grundy, Orchard Leigh, Rotherhithe, second, with an ugly, compact, bouquet-like mass, which would repel any lover of the graceful in flowers from using pompons. Mr. Pagram's were really pleasing, though less dried grass might have served.

#### Non-competitive Exhibits.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, was exceedingly well represented, having a very large group, and the flowers were of the highest quality. His chief novelties were Miss Mildred Grant, of a ruddy-flesh and creamy combination of colour. This has had two F.C.C.'s. Henry Perkins was also shown. It is a rich crimson. Nellie Perkins, purple and white; Hon. Mrs. Acland, incurved bright golden; Geo. Lawrence, Ben Wells, Earl of Arran, and Nellie Bean. His exhibit occupied the whole west end of the Aquarium.

Messrs. B. S. Williams and Son, Upper Holloway, N., sent Verbena Miss Wilmot, retarded Spiræas, with Ericas, Liliums, and foliage plants and Orchids in flower.

Hobbies, Limited, from Dereham, furnished a very beautiful display of artistic merit, and included many very fine exhibition Chrysanthemums.

Messrs. Cannell and Sons, Swanley, staged in their usual place a double table length of specimen flowers, including the following, among others: Marquis V. Venosta; Sensation (grand colour); Mr. F. S. Vallis, plenty of substance; Mrs. A. Tuckett; W. R. Church; Lord Hopetoun (1903), a grandly coloured novelty, bright deep crimson above and old-gold reverse; Mme. Paola Radaelli; General Hutton; and Mermaid. They had also a superb collection of Zonal Pelargoniums, Violets, and Lorraine Begonias in variety.

Messrs. I. House and Sons, Westbury-on-Trym, contributed Violets in the varieties Luxonne, Marie Louise, St. Helena, Baroness de Rothschild, an improved Luxonne, being stouter, darker, and bigger in every way. Le Lilas, a purple; White Czar, pure white; Princess Beatrice; Comte de Brazza; Armidemi Millet, with variegated foliage; and Nana compacta, a very hardy one; and Mrs. J. J. Astor, that fine double purple.

Mr. W. J. Godfrey, Exmouth, Devon, sent an enormous collection of his famous southern flowers. In his stand were Exmouth Rival (rich and full); Mr. F. S. Vallis, of huge size; Sensation (grand colour); Godfrey's King; Triumph; H. E. Hayman, a grand thing; Miss E. Fulton; Exmouth Crimson; Duke of Devonshire, a large ruddy yellow flower; Loveliness, a big, "swirl-formed," soft yellow, with very broad petals; Charming, one of the finest yellows, with drooping florets; Wilfred H. Godfrey, a sweet flower, crimson above, with incurving tips coloured bronze; with Grandeur and Bessie Godfrey. Carnations were also included.

Messrs. T. Rochford and Sons, Limited, Broxbourne, Herts, were represented by a large and varied stock of retarded stuff, consisting of Lilies, Lily of the Valley, Spiræas, Azaleas, and Palms, with grouplets of that best of red-coloured winter-flowering Roses, Liberty.

Mr. J. Spinks, Summit Road Nursery, Walthamstow, E., and Messrs. J. Peed and Son staged groups of Chrysanthemums. Messrs. G. Boyes and Co., Aylestone Nurseries, Leicester, contributed a rich variety of tree Carnations, including Lady Carlisle, fringed pink; Mrs. Lawson; Duchess of Fife; and Lord Kitchener, the freest blooming winter variety they—Messrs. Boyes—have, coloured dark crimson.

Messrs. W. and J. Brown, Stamford, were strong in Apples, Pears, and other fruits, together with the Fire Dragon Geranium, Gloire de Lorraine Begonia, Heliotropes, and Rose Gloire de Polyanthes.

Mr. Vincent Slade, Taunton, Somerset, contributed Zonal Pelargoniums in the following chief sorts: Lord Roberts, Lord Curzon, Mary Beton, Barbara Hope, the Khalifa, President McKinlay, Scott Turner, Cerise, Ian MacLaren, and J. M. Barrie.

Messrs. H. Cannell and Sons, Swanley, Kent, sent a kingly collection of Apples, in which there were some very excellent samples of Lord Derby, Emperor Alexander, Stirling Castle, Bramley's Seedling, Blenheim Orange, Gascoyne's Scarlet, and the leading kinds in general.

Mr. H. Tyler, The Mead, Child's Hill, near Kilburn, N.W., staged nice blocks of his noted Mushroom spawn.

From Norwich, Messrs. Daniels, Bros., Limited, presented a very varied representation of vegetables. Their Crimson Perfection Beet was a model of good culture; Potatoes, Royal Sovereign and Up-to-Date; Champion Leek, White Spanish and Ailsa Craig Onions; Improved Hollow-crown Parsnips, and Daniels' King Cauliflower were each seen to great advantage.

Mr. J. George, 14, Redgrave Road, Putney, S.W., set up some sundries-men's specialities in Thomson's Vine Manure, Nicotine Fumigator, and Mushroom Spawn. Messrs. Dowell and Son of Hamme Smith had pots, labels, fertilisers, &c.

Horticultural sundries were very largely represented by Messrs. Wood and Son of Wood Green, N., who staged their Voltha Emulsion fungicide; their Orchid peat, specially prepared; with raffia, stakes, lawn mowers, turf maul, watering pots, baskets, fancy and for garden use; gloves, labels, twine, and wire baskets.

From Messrs. Cutbush and Son, Highgate, London, N., came Malmaison Carnations, Sir Charles Fremantle being prominent; also Verbena Miss Ellen Wilmott, retarded Spiræas, Ericas, tree Carnations, Liliums, Vines, and foliage plants.

Messrs. Pearce and Co., Holloway Road, London, were forward here with their well-built model greenhouses, frames, and stoves. The firm received a silver medal for their exhibit at the Alexandra Palace a day or two previously.

Messrs. Fenton and Son, Tudor Street, Whitefriars, E.C., had greenhouse hot water apparatus in various styles; and from Mr. Jas. Arnold, 32, St. Paul's Road, Camden Town, N.W., came samples of loams and sand. The Ichthemio Guano Co., Ipswich, had samples of their fertilisers. Messrs. Lawes, of 59, Mark Lane, London, showed their chemical manures; as did the Permanent Nitrate Co.

The "Pattison" Patent Lawn Boots were again brought forward. These are of exceedingly good quality and make.

Mr. H. Love, 1, Melville Terrace, Sandown, I.W., contributed a goodly set of blooms, and Mr. W. Seward of Hanwell had a number of seedling novelties. Mr. J. Russell had Eurya latifolia and Crateguses, together with a collection of Apples. Messrs. J. Laing and Sons, The Nurseries, Forest Hill, S.E., also had a nice table of fruits, Apples principally.

Ferns were grandly exhibited by Messrs. J. Hill and Son, Barrowfield Nurseries, Lower Edmonton. The group was admirably arranged, and fine stuff were included, the chief features being Adiantum Capillus-Veneris imbricatum, A. macrophyllum, A. Collisi, Nephrolepis pectinata, Lygodium scandens, and fine pieces of Elk's-horn Ferns, with specimen Gymnogrammas.

#### Portsmouth, October 29.

The annual show was held in the Town Hall. The entries were not so numerous as in the past. The cut blooms exhibited the result of a backward season; many were but partially developed. Plants were similarly weak. Fruit and vegetables were numerous and good. Japanese cut blooms formed the most important part of the show. The principal class was that for forty-eight, in not less than two dozen varieties. Only two competed, the best coming from Mr. C. Penford, gardener to Sir F. Fitzwygram, Bart., Leigh Park, Havant. In numerous instances here the blooms were but partly expanded, the most noteworthy being General Buller, Florence Molyneux, The Princess, Duchess of Sutherland, George Penford, Le Grand Dragon, F. Smith, J. Penford, W. R. Church, and C. Penford, the latter a semi-incurving variety of pleasing colour, buff base, with dull red stripes and suffusion. Mr. J. Agate, Brockhampton Nurseries, Havant, was second.

In the class for twenty-four in not less than twelve kinds, the competition was more brisk; four staged, all creditably, the best coming from Mr. J. Love, Park Road, Cowes—an even set, of which the following were conspicuous: M. Chenon de Leché, Nellie Pockett, Lily Monmouth, Lord Ludlow, Phœbus, and Lady Hanham. Mr. W. G. Adams, 89, Clarendon Road, Southsea, a close second.

Mr. J. Tosh Robb, Woolston, secured the coveted award for twelve distinct with quite a creditable set. Mr. C. E. Creighton, Stanswood, Cowes, second, with Mr. T. Williams, Queen's Crescent, Portsmouth, third. Incurved varieties were poor.



For thirty-six, Mr. J. Agate was the only exhibitor, winning first place. Such varieties as Major Matthews, Edith Hughes, Miss A. Hills, D. B. Crane, and Jeanne d'Arc were creditably staged.

The next class, that for twenty-four incurved, showed better quality. The blooms were more developed, Mr. Adams winning first place easily with Baron Hirsch, D. B. Crane, C. H. Curtis, and Globe d'Or, creditably staged. Mr. C. White, 6, Garden Terrace, Southsea, second. Mr. J. Love won for six distinct, Mr. C. White second. In the class for a bouquet of Chrysanthemums seven entered, making a pleasing feature in the show. Miss Peel won with a pleasing arrangement of yellow. Mr. Sackett second. A class was set apart for table decoration, open to ladies only. Amongst five competitors, Mrs. R. Jefferies, Nursling, Southampton, secured the premier award for a lightly arranged design. Mrs. W. H. Berry, Portsmouth, a close second. Mrs. L. Fay, 242, Commercial Road, Landport, third. Plants were few in number. Mr. Burridge, North End Nurseries, won the first prize for a combination of Chrysanthemums and foliage plants, all too much crowded.

Apples and Pears were well staged. Mark Gill, Esq., 82, Osborne Road, Southsea, won for eight dishes in the former section, while Mr. C. Dear occupied a similar position for Pears. Vegetables were numerous and good. Mr. W. Cheaton, gardener to Sir W. King, Shrover Hall, Cosham, secured the leading award for nine dishes, with good produce.

### Kent County Chrysanthemum, October 29 and 30.

A bright display, though a shade smaller than in some former years, was on view at The Rink, Blackheath, S.E., as above dated. Decidedly the best flowers were those seen in class 2, for eighteen each of Japs and incurveds. Mr. C. Payne, gardener to C. J. Whittington, Esq., Sandhills, Betchworth, Surrey, was placed first, and staged handsome blooms of General Buller, Mrs. Gustave Henry, Mrs. G. Mileham, Master C. Seymour, Lord Ludlow, and Princess Alice de Monaco. These were the best, the others, as follows, being smaller: Mrs. Coombes, Mrs. White Popham, Edith Tabor, Marquis V. Venosta, Mrs. F. E. Smith, Mr. T. Carrington, Jane Molyneux, James Bideneope, Mrs. F. Greenfield, Mrs. R. Darby, and Blanda. The best incurveds were Baron Hirsch, Dome d'Or, Jeanne d'Or, Topaze Orientale, and Matthew Russell. The second place here was accorded to Mr. F. Tapper, gardener to Sir Samuel Scott, Sundridge Park, Bromley, with really good blooms of W. R. Church, Mr. L. Remy, Marquis V. Venosta, Lord Ludlow, Mrs. R. Darby (excellent), and Mrs. Mileham. His incurveds were of fair size, but very irregular. Third came Mr. H. C. Strickland, gardener to Sidney Smith, Esq., Clovelly, Grove Park, with much smaller flower, and none could be called of high merit.

The twenty-four Japs, distinct, brought only one entry; this from Mr. J. E. Poole, gardener to A. G. Hubbuck, Esq., Elmstead Lodge, Chislehurst, whose finest flowers were W. R. Church, Mrs. Barkley, Henry James (good), and General Buller. For the twelve Japs, Mr. J. Lyne, gardener to H. F. Tiarks, Esq., president of the society, Foxbury, Chislehurst, led, his only opposer being Mr. C. Bellis, gardener to Mrs. G. M. Faulkner, Fonthill Lodge, Forest Hill, S.E., but both sets were a long way below the higher exhibition standard. Mr. Lyne was alone in class 5 for twelve incurveds, having a very good bloom of Mme. Ferlat, though rather loosely built; but the others were faulty and ill-dressed.

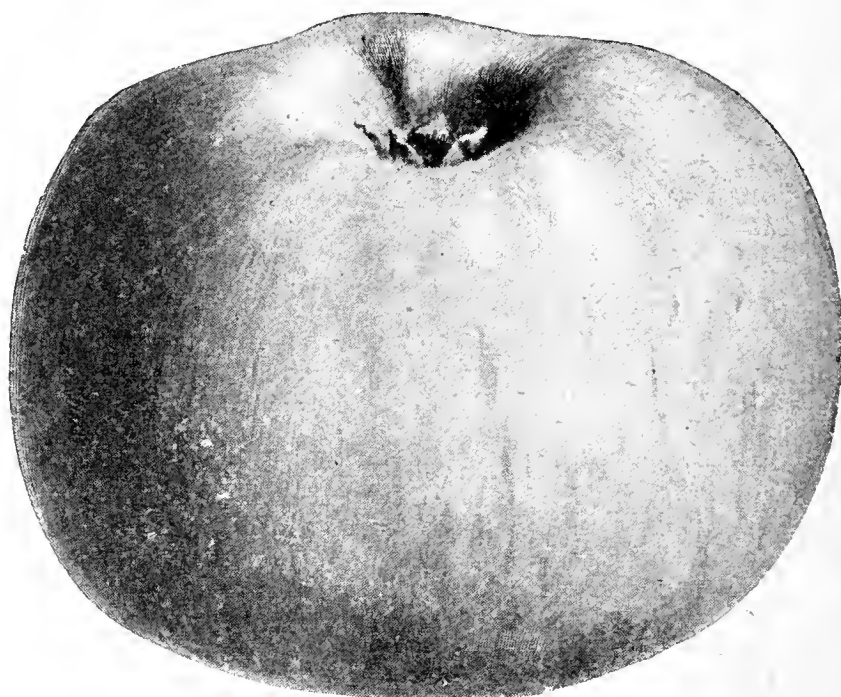
One of the best classes in the show was that for twelve reflexed Chrysanthemums, in six varieties. The flowers were of fair size, and included Dorothy Gibson, Aureole, King of Crimson, Chas. Tutt, and Amy Furse in Mr. J. E. Poole's first prize set. Mr. T. E. Cauldrey, gardener to W. Watson, Esq., Woodstock Grove Park, Lee, was second. For twelve pompons, in bunches of three, two came forward, viz., Mr. F. Gilbert, of Kendal House, Blackheath (first), and Mr. W. Pascoe, of Baston Manor, Hayes. In the leading set were the varieties W. Sabey, Rosinante, W. Kennedy, Abre de Noel, Maid of Kent, Jeanne Hachette, Pygmalion, and President. Mr. G. D. Judge, with Jane Molyneux, had the best (and only) six white Japs, staging superb flowers. Mr. T. E. Cauldrey was represented for "any coloured sort" by Mrs. White Popham; and Mr. Strickland staged Mr. E. Bennett, and got first for six of the incurved variety.

Mr. L. Humphrey, The Hawthorns, Lewisham, was first for an epergne of the flower, and Mr. A. W. Hollands, Lee Park, second. In the previous class, for a hand bouquet, Mr. C. Townsend, the Lee Floral Stores, staged the best arrangement, Mrs. L. Humphrey coming second.

Mr. J. Lyne was first of two for a group of flowering and foliage plants, having Crotons, Cattleyas, Ferns, &c. Mr. W. Heath, gardener to C. Cutler, Esq., 11, St. John's Road, was second. Mr. A. W. Holland, Lee Park Nursery, led for a group of Chrysanthemums. In the amateurs' classes, Mr. G. C. Farmer and Mr. E. A. Watts had the honours all to themselves. Mr. W. Taylor, of Tewkesbury Lodge, led for both black and white Grapes; while in the Apple and Pear competitions, Messrs. Lyne, Farmer, and J. A. Baker portioned the spoils.

The best Japanese bloom in the show was Mrs. G. Mileham, from Mr. D. Jude; while the premier incurved was Lady Isobel, from Mr. T. E. Cauldrey. In class 41, for a collection of six kinds of vegetables, the winners were Messrs. Humphrey, Lyne, and Musson.

Amongst those who staged non-competitive groups were Mr. H. J. Jones, Ryecroft, Lewisham, who had some new varieties, and received certificates for three of them, namely, Edith Smith (creamy-white), Henry Perkins (purplish and gold), and Mildred Ware (tawny red). He was awarded a silver-gilt medal. Mr. J. Surman, Victoria Nursery, Beckenham, had also a comprehensive group, and received a similar award; while, for a stand of odorous Violets, Messrs. I. House and Son, Westbury-on-Trym, near Bristol, had a silver medal; likewise Messrs. J. Peed and Son, West Norwood, for a good collection of Apples; and Messrs. Dover and Co., of Blackheath, the same for floral designs. Successful concerts were held on both evenings of the show, the Metzner Orchestra supplying the music. Mr. F. Fox, gardener at The Cedars, Lee, who is hon. sec. to the society, deserves high commendation.



Apple, Riva<sup>1</sup>.

(See page 428.)

### Woolwich, October 30 and 31.

This society, which has now been established several years, and holds a summer show in July and a Chrysanthemum one in the autumn, had its usual exhibition in the spacious Drill Hall in Beresford, and a very good display was seen. A good deal of local éclat was given to the proceedings from the fact that Lady Charles Beresford, the wife of the member for the borough, attended and declared the show open at 3 p.m., Lord Charles Beresford charming the company with a pleasant and sympathetic speech.

In the open classes there were two for groups, one of Chrysanthemums and foliage plants, and one for flowering plants. Those staged were somewhat of a mediocre character. The class for 24 blooms of Japanese brought two good collections. Mr. R. Kenyon, gardener to A. F. Hills, Esq., Monkham, Woodford, was placed first with very good blooms of Miss Alice Byron, selected by the judges as the best specimen bloom of Japanese in the open classes; Mrs. Barkley, Lord Ludlow, Bronze Solèil d'Octobre, Madame Herwege, a white sport from Australie, Mrs. T. W. Pockett, Pride of Madford, Lily Mountford, W. R. Church, Madame G. Henry, Madame G. Bruant, &c. Mr. J. Simon, gardener to W. R. Mann, Esq., Bexley, was a very good second. He had in good form Lord Roberts, Lily Mountford, Lady Byron, J. R. Upton, Mrs. George Mileham, Mrs. Coombes, Marjorie, Mutual Friend, Loveliness, Lady Hanham, Pride of Madford, Very Good, &c. Mr. J. Simon was the only exhibitor of 24 blooms, viz., twelve incurved and twelve Japs; the former were a bit weak. The best were Lady Isobel, Globe d'Or, Duchess of Fyfe, Mrs. James Murray. Selected as the best incurved: E. Nonin, Madame Darrier, &c. His Japs were generally similar to those staged in the previous class.

Mr. E. Russell, gardener to T. Pirie, Esq., Crayford, was first with twelve bunches of pompons. There were good blooms of W. Sabey, Fremy, Comte de Morny, Rosinante, Rose Trevenna, &c.

Blooms of Japanese arranged with foliage was an attractive feature, and there were classes for Japanese, six blooms of one variety.

A leading feature was the vases containing specimen blooms. In the class for a pair of vases having good blooms well arranged,

Mr. E. Russell, gardener to T. Pirie, Esq., a successful exhibitor in some of the minor classes, was second. With twelve blooms in vases, three in each, Mr. J. Simon was first; there being a good competition.

In the division for single-handed gardeners there were a few classes, but the competition was small. The amateurs, many of whom are workmen in the Royal Arsenal, showed up very much better, and there was a good competition among them. One of the most successful was Mr. C. Symms, of the Laboratory Department; and he again won the handsome Vincent trophy, which is held for one year. Twelve blooms of Chrysanthemums have to be shown, and Mr. Symms won it for the third time for his department, having twelve very good blooms of Japs, chief among them being George Lawrence, selected as the best bloom in the amateurs' division; Madame G. Henry, Mrs. Barkley, M. Louis Remy, Mrs. H. Weeks, W. R. Church, Godfrey's Masterpiece, &c. Generally the display made by amateurs was very good.

There were a few classes for fruit, Apples and Pears preponderating; there were good collections and single dishes of vegetables; and some pretty floral decorations; tables, epergnes, baskets, &c.

Among miscellaneous exhibits Messrs. Wells and Co., Limited, Earlswood, Redhill, had two stands of fine Japs, including Mrs. G. Milcham, Madame Herrewé, Mrs. T. W. Pockett, Madame G. Henry, Miss A. Byron, H. E. Hayman, Nellie Towers, Mrs. A. McKinley, Hon. Mrs. Tennant, Godfrey's Masterpiece, &c. Messrs. G. Bunyard and Co., Maidstone, had a table of dishes of Apples; and Mr. W. J. Minninnick, florist, Woolwich, had some charming floral decorations, showing excellent workmanship.

### Reading and District Gardeners'.

About 120 members assembled at the last fortnightly meeting of the above Association, when Mr. James C. House of Westbury-on-Trym gave a lecture on Sweet Peas. In introducing the subject the lecturer asked the question, "What are the qualities of the Sweet Pea which give it such a high position amongst flowers?" and answered it as follows: The wide range of colour; the softness of its tints; perfume; durability; grace of form; length of flowering season; and that the seed was within the reach of all. Passing on to varieties, he recommended as the best in their various colours: Salopian (crimson), Lord Rosebery (rose and carnine), Prima Donna (pink), Miss Wilmot (salmon), Countess of Aberdeen (blush), Hon. Mrs. Kenyon (yellow), Navy Blue (deep blue), Countess Cadogan (medium blue), Dorothy Tennant (mauve), Duke of Westminster (violet), Black Knight (bronze or maroon), Lady Grisel Hamilton (lavender), Dorothy Eckford (white), Lottie Hutchins (fancy), &c. An interesting discussion followed, in which the president, Messrs. Stanton, Powell, Neve, Hinton, &c., took part. The exhibits were numerous and interesting. Honorary; Mr. G. Stanton (Park Place) made a splendid, as well as an educational, exhibit of a collection of Apples and Pears, consisting of a typical specimen, each correctly named, of fifty varieties of the former and fifty varieties of the latter; also a basket and two pedestals, standing about 2½ ft high, of beautiful specimens of Sweet Peas, illustrating in a remarkable manner the lateness as well as the mildness of the present season. Mr. Barnes of Bear Wood staged three magnificent Melons (not yet named); Mr. J. Pound of Caversham two dishes of Apples, splendid fruits for the season; Mr. Tunbridge, Medmenham, a brace of Cucumbers; whilst for the Cultural Certificate Mr. J. Wicks, the Gardens, Broad Oak, staged six well-grown specimens of Turnford Hall Begonias, and Mr. House of Oakfield Gardens a seedling Chrysanthemum. The Certificate was awarded to the Begonias.

The prizes won in the recent Essay Competition were presented to the successful competitors as follows: Seniors: "All phases of pruning in connection with hardy fruit culture." First prize, value 40s. (mathematical instruments and microscope), Mr. C. P. Cretchley, The Gardens, The Honeys, Twyford. Second prize, 30s. (clock), Mr. G. Hinton, The Gardens, Walmer, Reading. Juniors: "The best means of maintaining a supply of vegetables all the year round." First prize, 30s. (six vols. "Wright's Fruit Growers' Guide"), Mr. W. G. Wadge, The Gardens, Bear Wood. Second prize, 20s. (mathematical instruments), Mr. A. Etherington, The Gardens, Park Place. Four new members were elected.

### "Chemistry of the Farm."

This forms No. 1 of Morton's Handbooks of the Farm, published at 2s. 6d. by Messrs. Vinton and Co., Limited, 9, New Bridge Street, London. The present issue is the fifteenth edition and fourth revision of Professor R. Warington's book, which has been a leading light to farmer and gardener students of this subject for nigh twenty-five years. There are over 250 pages of very explicit and reliable matter, and the price of the book is such as puts it within the means of the youngest apprentice or journeyman gardener.



### Fruit Forcing.

**PEACHES AND NECTARINES: EARLIEST FORCED HOUSE.**—The final thinning of the shoots or branches should have immediate attention, unloosing the trees from the trellis and tying them in convenient bundles so as to admit of ready access to the woodwork and glass for cleansing operations. Wash the glass with water, and the woodwork with carbolic soap and water, using a brush; then wash the trees with a solution of paraffin soft-soap, 4oz to a gallon of water, at a temperature of 135deg, applying the solution with a brush, taking care not to injure or dislocate the buds. If necessary, the dressing may be repeated, adding ½oz sulphide of potassium to the solution, thus combining an insecticide with a fungicide. Limewash the walls. Tie in the trees loosely, allowing space for the growths to swell without binding, letting the young shoots be laid in about 9in asunder, and not closer on the branches than 15 to 18in. A shoot of 12 to 15in length will give a good percentage of fruit for thinning, provided the wood be well ripened, and a Peach worth the name to every foot of trellis covered by the trees is quite as much as those under early forcing can support year after year, though the medium sized Peaches and Nectarines may be allowed only a space 9in square.

Under the most approved methods the trees will have been at rest some time, and the roof lights having been removed, the borders with the recent rains have been well moistened down to the drainage. The house also would be thoroughly cleaned, the trees untied, pruned, dressed with an approved insecticide, rearranged and tied on the trellis, the border surface dressed, and all put in complete order when the leaves were all down, ready for a start when the time arrives. If, however, the roof lights have not been removed, do not allow the soil to become too dry at the roots of the trees, as that is sufficient to cause the buds to fall. If the trees are weakly or with too many buds, a supply of liquid manure whenever water is necessary will be of great benefit. The loose surface soil or mulching also should be removed down to the roots, not disturbing them, but supplying an inch or two thickness of good loam, afterwards sprinkling on it about 4oz per square yard, and pointing in lightly, of a mixture of five parts bonemeal and two parts double sulphate of potash and magnesia (refined kainit), mixed. Borders that are rich in humus from heavy dressings of manure or thick liquid may be dressed with basic slag powder, using about 4oz per square yard and pointing in not so deeply as to disturb the roots. This acts as a corrective of sourness from the lime (about half), and supplies phosphoric acid. Or, dress with freshly slaked lime in about the same proportion of weight, which will be much bulkier dressing, pointing in without disturbing the roots to any great extent, omitting the top-dressing before mentioned. In treating the border it should be practised on both inside and outside borders. Admit air to the fullest possible extent, a little frost not doing any harm to the trees.

**SECOND EARLY HOUSE.**—The trees are now leafless, and should be pruned after unttying. The house ought then to be thoroughly cleansed, with the object of exterminating insects before they have time to find safe quarters. A good syringing with petroleum and water, a wineglass-ful of petroleum to 4 gallons of water, one person syringing into the vessel and another on the house and trees so as to wet every part, is a preliminary step that we have found of value, and it does not leave a film on the glass, as do soapy solutions. In pruning early forced trees it is not advisable to cut away much wood, nor indeed any kind of trees at the winter pruning, confining it to removing any useless parts, and any long, unripe shoots which may be cut back to a triple bud, making sure that one is a wood bud, or to a wood bud on well ripened wood. Shoots, however, need not be shortened under any circumstances except where there is not space for the successional growths, or to originate growths for furnishing the trees. Those of 8in to 12in in length should not be shortened at all, as they usually have wood buds at their base and one at the extremity, the others being blossom buds. It is a mistake to retain much wood, which weakens the trees in flowering, and there is not space for training the young growths without crowding. In other respects treat the trees and borders as advised for the earliest house.

**HOUSES STARTED IN FEBRUARY.**—The trees are shedding their leaves, and the buds are not too highly developed; this is assuring of the trees retaining them, for over-development of buds, combined with dryness at the roots and fluctuations of temperature, with changes of moisture, are the chief causes of the buds being cast. Any lifting or root-pruning yet in arrears



should be seen to and brought to a close as soon as possible. When the leaves are all down it will be an advantage to remove the roof lights and expose the trees to the weather until the time of starting, or till the buds commence swelling. The severest weather will not injure those with ripened wood. Where the roof lights are not moveable admit air freely in all but very severe weather, and even then, if the hot-water pipes can be emptied of the water and kept so, and see that there is not any deficiency of moisture in the borders. If the trees are not lifted remove the surface soil down to the roots, and supply fresh stiff loam, to which has been added some charred refuse, not more than one-tenth, and a sprinkling of bonemeal.—ST. ALBANS.

### Kitchen Garden.

**SPINACH.**—Thinning out the plants may be continued, removing many of those with the largest leaves, the smaller plants wintering better. Take out weeds from among the plants, also between the rows, the soil being loosened with the hoe when dry.

**TURNIPS.**—The growth of Turnips sown in early autumn has been free, and the plants rapidly become crowded, which hinders the swelling of useful roots. The necessary reduction of numbers must be carried out, weeds removed, and the soil lightly stirred among the plants.

**CAULIFLOWERS AND BROCCOLI.**—The heads of these now turning in are liable to be injured by frost. Lift some of the plants and lay in in damp soil in a cool structure, or protect the heads by breaking some large leaves over them.

**ASPARAGUS BEDS.**—The stems of Asparagus have all withered, and should now be cut down. Some growths are full of berries which easily fall, and the result will in another year be a crop of seedling plants. These are not desirable on permanent beds, so it is best to cut off these berried plants first, avoiding scattering the berries on the soil. When the stems have been cleared off, then fork up the weeds and afterwards point up the surface, avoiding injuring the crowns of the plants by going too deep. Follow this by spreading over the whole surface of the beds a mulching of short, decomposed manure, and cover with a layer of clean soil from between the beds. In order to finish off the beds clean and neat, cut down the sides with a spade and leave the intervening spaces level. The manure and soil may remain until spring, when some of it may be removed.

**CELERY.**—Any rows of Celery that remain to be earthed should be dealt with in dry weather, choosing a period when there has been but little rain for several days. Break down the soil and apply it at once to the plants, drawing the leafstalks closely together and working the soil well round each plant. Finish off the ridges in a neat manner.

**BLANCHING ENDIVE.**—Endive is a useful salad on the approach of winter, but needs blanching to make it tender. One of the oldest methods of blanching is tying up the leaves about two-thirds of their way up, so as to well enclose the hearts, and keep away the light from them. It is only desirable to blanch a few plants at a time, the exact number being ascertained by the needs of the establishment. Besides tying up the leaves, there are other methods of blanching. Two boards may be placed lengthwise over the rows, forming a ridge. Under this the plants will be kept dry, and, at the same time, blanch for use. A similar effect may be produced by inverting pots over each plant, the pots being sufficiently large to well cover them. They must be perfectly dry at the time, or decay will set in. When frost and snow is likely to approach, take up plants and place in frames, the roots in damp soil. If a dry, sheltered border under a wall is available some plants may be preserved there, covering with boards, pots, handglasses, further protecting during frost with straw or mats. One of the hardiest Endives is the broad-leaved Batavian. It is less liable to decay, and does not require the special protection that Moss-curbed and some others do. Slates placed over plants will also blanch them.

**LETTUCE.**—All plants, whether full-grown or of seedling size, should be retained as long as possible. The large plants may, if growing out in the open, be lifted and placed in frames, or under the shelter of a wall. The protection needed by Lettuce is not so much preservation from cold as from damp, which causes the leaves to rot at the base. Therefore, if moisture can be prevented being deposited by some covering, and, at the same time, a free circulation of air always ensured, the plants will keep in good condition for some time. Young Lettuces, both of Cos and Cabbage varieties, often winter admirably under walls, especially when they are only of medium size.—EAST KENT.

### A Fruitful Plum Tree.

A Plum tree in the garden of Mr. Jay, of Southgate, London, bore a fine crop of fruit. Before this crop ripened the tree bore a second crop, which matured soon after the first crop was gathered; and Mr. Young, the gardener, has been supplying his master's table with dessert from this crop for several weeks. The tree, which is still in full leaf, has now a third crop of fruit, which has attained the size of green peas.



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**BLACK CURRANTS AND BUD-MITE (W. M.).**—We should have thought that everyone was aware of the utter impossibility of overcoming such a severe attack as yours is. The plants should be grubbed up, root and stock, and burned. Write to the Board of Agriculture, Whitehall, London, for their pamphlet, which will give you full information and guidance. This can be obtained free of charge.

**PROVIDENT GARDENERS (H. C. W.).**—What we wrote was that the United Horticultural Provident and Benefit Society originated at the Green Dragon Hotel, in Bishopsgate Street, but we should have further stated that the name and present address of the secretary is Mr. Wm. Collins, 9, Martindale Road, Balham, London, S.W., to whom we have forwarded your letter. We thoroughly commend this society.

**EARLY POTATO CULTURE (J. J. G.).**—My employer wishes me to take in hand an experiment with early Potato culture, and, if it succeeds, will go in extensively for it. We will plant one acre from boxes, the same as the Ayrshire farmers do. Can you give me any details? Are the boxes of Potatoes stood in tiers in cattle sheds? About what length are the sprouts when they plant them out? To stand the boxes in tiers means that the growth will be blanched, does it not? Does that matter? What time are the Potatoes put in boxes in the sheds, and what is the usual time for planting? Our field is a sheltered one, on the shore of the Bristol Channel, an ideal field for the purpose. We purpose planting Duke of York Potato. I have taken in the *Journal of Horticulture* for a good many years, and generally look over the page allotted to farm work, hence my reason for thinking your writer on farm work may be able to give me the information I ask for. Trusting I am not trespassing in any way in asking these questions.

[The practice you allude to as Ayrshire is nearly a century old, we having seen it followed over sixty years ago on the alluvial soils of the Ouse Valley. The seed Potatoes are stood on end, eyes upwards, in boxes or trays about 2ft 6in long and 15in wide, and 2in to 2½in deep, a piece of wood being affixed in each corner of the box, about 4½in high, so that when the Potato sets are placed in the boxes these can be placed one upon another, thus allowing space for the sprouting and securing the sprouts of a short, sturdy, and greened nature. The sets are thus set up about the middle of February, and placed in any room, cottagers or small holders having them in the kitchen or other place where frost has not access, this being all that is necessary, hence any outbuilding, or even cow-houses, as you mention, will answer. The great point is not to have them in too warm a place, so as to start the sets into weakly and long sprouts, but have them as stout as possible, and about ½in longer from that to ¾in at planting time. If likely to be too late, the boxes are covered over so as to ensure more warmth and speedier sprouting. This results in blanched sprouting, hence the sets are generally inured to the light, and are kept in a cool place if likely to be too forward, until planting time, always having them well hardened off by keeping in cool quarters, but safe from frost, for a time previous to planting. Planting is usually practised in the third or fourth week in March, the rows being about 20in apart for the first early varieties, such as the Ash-leaf kinds, Sharpe's Victor and Early Puritan, a foot distance being allowed between the sets in the rows. Well rotted manure is placed in the rows, and the sets are covered about 5in deep. The plants are hoed as soon as well up, cleanly culture being very important, and when about 4in high they are earthed or moulded up with hoes, so that the furrows are narrow and the rows broad. The crop is ready to lift by the latter part of June in the district named, and probably would be somewhat earlier in your locality, it possibly being advisable to plant earlier. The great thing is to so plant as to safeguard as much as possible from injury by spring frosts, though oftentimes the tops are cut off, when planting is deferred, to the third or fourth week in March. The varieties named are best for first early crops, and if you work on the plough system of planting and earthing up, the rows must be at least 4in more apart. The variety you name is a second-early, it, Duke of York, and White Beauty of Hebron being good croppers, and would require at least 24in distance from centre to centre of row.]

**NOTICE OF APPOINTMENT (H. N.).**—We make no charge for such announcements in our editorial pages.

**BOOK WANTED (T. W. N.).**—We know of no separate work which treats of rockery-making with artificial cascades. Special information on the subject is contained in the new edition of "The Gardeners' Assistant," and you will also find information in "Cassell's Popular Gardening."

**TRANSPLANTING LARGE ASH TREE (W. J. Hufts.).**—As the Ash has a good fibrous root formation generally, the tree 10ft to the branches, 2ft 8in in circumference, at 3ft from the ground, and with 20ft spread of branches, it is likely to transplant safely, if carefully lifted with a good ball of soil, preserving all the roots and soil attached to them in an area not less than one-third the spread of the branches. It is preferable, however, to take out the trench at half the distance from the stem all round the head has spread of branches, and then work under the roots towards the stem, removing all the soil that does not adhere well to the roots. Then place battens under the ball of the tree, and secure erectly; it can then be removed to its new position. In this it should not be planted deeper than it was before, and being well secured against displacement by wind, we do not see why it should not do well after replanting. As you have been successful with Horse Chestnut trees of similar size, there is nothing to be doubtful about in removing the Ash. It would be best lifted and replanted now.

**CULINARY PEA WITH THREE FLOWERS (F. G. S.).**—I find a Pea among a very late sowing of Veitch's Perfection, which has the peculiar property of carrying three blossoms on nearly every stem, on a shoot 12in long; there are six stems, every one of which carry three blossoms. This would evidently be a valuable one for breeding from, but it is so late, I see no prospect of saving any seed from it; the blossoms all drop unfertilised. The stem is about a yard long, trailing on the ground, and shows no indication of breaking at the base. Can you, or any of your readers, suggest anything likely to result in saving seed? If I could save the plant over the winter I might obtain seed.

[It is unusual for garden Peas to produce three flowers on a stem, especially the variety you name, and not less remarkable that they drop off without setting. Possibly they are devoid of ovaries, or, it may be, of pollen. If not the latter there may be something in it of value for "breeding purposes." We are not aware of the rootstock of a Pea having been kept over winter, as sometimes is done with Scarlet Runner Beans, but you may lift the plant carefully, pot it, and cut off the haulm to within a few inches of the soil, keeping in a cool house during the winter. Whether it would live and push growth from the base we cannot say, but as it has not done so already, we think it hardly likely to do so.]

**NAMES OF PLANTS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (Camwell).—*Stanhopea Wardi* var. *aurea*. (Caterham).—*Cupressus Lawsoniana nana*. (D. G., Yorks.).—*Hibiscus*, probably *Cameroni fulgens*. (J. Taylor).—*Funkia ovata*. (J. B.).—A specimen of the Osage Orange, *Maelura aurantiaca*, which we have never figured so far as we remember. 1, *Juniperus virginiana*; 2, *Abies Nordmanniana*; 3, *Juniperus chinensis*; 4, *Arbutus Unedo microphylla*; 5, *Pinus excelsa*; 6, *Tilia argentea*; 7, *Picea alcockiana*; 8, *Ulmus glabra* (Wych Elm); 9, *Larix europaea*; 10, *Larix* sp., leaflets had fallen; 11, *Juniperus chinensis albo-variegata*; 12, *Ceanothus* sp., flowers very much withered.

**NAMES OF FRUITS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (M. R.).—1, *Souvenir du Congrès*; 2, *Beurré Charneuse*; 3, Apple, *Crimson Costard*. (X. Z. A.).—1, *Blenheim Orange*; 2, *Cox's Pomona*; 3, *Lane's Prince Albert*. (J. M. W.).—*Pomeroy* of Somerset. (J. M.).—1, *Hollandbury*; 2, *Cox's Pomona*; 3, *Melon Apple*; 4, *Hambleton deux Ans*; 5, *McIndoe's Russet*; 6, *Hawthornden*; 7, *Tibbett's Pearmain*. (W. L. Suffolk).—1, *Emperor Alexander*; 2, *Pott's Seedling*; 3, *Stamford Pippin*; 4, *Bess Pool*; 5, *Gascoigne's Scarlet Seedling*; 6, *Herefordshire Pearmain*.

#### Publications Received.

"Report of the Agricultural Experiment Station of the University of California for the years 1898-1901," part 1. \* \* \* "Missouri Botanical Garden, thirteenth report, 1902." This vol. is chiefly devoted to the *Yucca*. \* \* \* "The Scottish Farmer." \* \* \* "Pictorial Practical Rose Growing," by Mr. W. P. Wright, 1s. net; Cassell and Co. \* \* \* "The Canadian Horticulturist," October, 1902. Special features: St. John Peach, Improving an Old Orchard, The Potato Blight, Summer Flowers for Florists. \* \* \* Board of Agriculture—"Agricultural Returns, 1902." (Acreage and Live Stock.) Tables showing the acreage under crops and grass, and the number of horses, cattle, sheep, and pigs in each county in Great Britain.

## Obituary.

David Saunders of Cork.

This gentleman died, after a brief illness, on October 12. He was the senior partner of the old-established firm of Friars Walk Nurseries, Cork. Nurtured from his childhood at the calling of a florist, by his energy, honesty, and enthusiasm he commanded an extensive connection and made many friends. Among all Irish gardeners out of situation he was their "friend in need." For many years he suffered from a weak heart, which at last ended by his passing away from a widow and a numerous family. The business will be conducted as usual, his son settling into his worthy father's position, assisted by his English foreman, Mr. Hawker.

## Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.                 | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil. At 9 A.M. |           |                |                | Lowest Temperature on Grass. |
|-----------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|------------------------------------|-----------|----------------|----------------|------------------------------|
|                       |                    | At 9 A.M.               |           | Day.      | Night.    |             | At 1-ft. deep.                     |           | At 2-ft. deep. | At 4-ft. deep. |                              |
|                       |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                    |           |                |                |                              |
| 1902.                 |                    |                         |           |           |           |             |                                    |           |                |                |                              |
| October and November. |                    |                         |           |           |           |             |                                    |           |                |                |                              |
| Sunday ...26          | S.W.               | deg. 49.9               | deg. 48.5 | deg. 55.4 | deg. 41.7 | Ins. 0.02   | deg. 50.8                          | deg. 52.0 | deg. 53.2      | deg. 34.0      |                              |
| Monday ...27          | W.N.W.             | 49.7                    | 46.9      | 54.3      | 47.3      | —           | 50.6                               | 52.0      | 53.0           | 41.0           |                              |
| Tuesday ...28         | S.W.               | 45.6                    | 45.1      | 55.1      | 38.8      | 0.02        | 49.8                               | 52.0      | 53.0           | 29.8           |                              |
| Wednesday 29          | S.E.               | 47.7                    | 46.7      | 56.1      | 42.0      | 0.02        | 50.6                               | 51.8      | 53.0           | 31.3           |                              |
| Thursday 30           | S.W.               | 50.2                    | 49.8      | 55.8      | 39.2      | 0.01        | 49.7                               | 51.7      | 53.0           | 30.0           |                              |
| Friday ...31          | S.W.               | 39.7                    | 39.2      | 52.5      | 33.3      | —           | 48.0                               | 51.5      | 52.8           | 24.4           |                              |
| Saturday 1            | S.W.               | 48.2                    | 47.6      | 58.7      | 39.3      | —           | 48.7                               | 51.0      | 52.7           | 33.3           |                              |
| MEANS ...             |                    | 47.3                    | 46.3      | 55.4      | 40.2      | Total. 0.07 | 49.7                               | 51.7      | 53.0           | 32.0           |                              |

Dark misty mornings and dull days have been the prevailing features of the past week, with a few intervals of bright sunshine and slight showers on four days.



## Grievances.

The idea is so old that it has become proverbial, that the English farmer is ever a grumbler. The weather is never right, prices are never right, and his burdens are always heavier than those of his fellow subjects. One of the reasons, we venture to think, why there is so much grumbling among farmers is this. Each man lives in a little world of his own—quite isolated—without any (or few) attempts at co-operation with his brother farmers, and we all know that a burden shared is the easier to bear. We think among grievances the first we must note is that we are so inadequately represented in Parliament. Don't all exclaim at once "We know what you are going to say." The landed interest is fully represented, but the landed interest is not—the tenant farmer. That the interest should be identical we all know, but, alas! we all know that that is not the case. We have working men in Parliament; we have scientific men, we have lawyers, and great traders, but oh! such a lack of the genuine hard-headed tenant farmer.

Why this should be so is partly owing to apathy; partly too, for lack of the sinews of war, and partly because there is an undefined feeling that the candidature of a tenant farmer would not be agreeable to the land-owning section of the community. As we said a week or two back, quoting from



a writer on American agriculture, we only got a special minister when our agriculture was dead. Well, we don't quite think so, and we have not a word to say against our present man, but still it seems to us that it is only by happy chance we have got a good man this time—it is quite probable that at the next change of Government we may get a man with no more knowledge of our requirements than a two-year-old bullock.

It has been dinned into our ears so long that no Government cares twopence for us, that we are beginning to believe the statement, and thus we fail to exert ourselves when an election comes to remedy this state of things. Here the apathy comes in. The evidence that we have been reading lately relating to the malpractices of the remount buyers has not been very pleasant, and not calculated to give us a good opinion of those engaged in the traffic. There has been far too much of the shadiest class of horse-copers at work, and the Government has been defrauded and cheated on all sides. We don't wish for a moment to impugn the characters of those officers who did the work. As honourable men they expected to deal with honourable men, but their very simplicity landed them in difficulties. A few shrewd fox-hunting farmers, examples of which we could pick out in every hunt in England, would have done the work far better, with credit to themselves and at a tithe of the expense to the country. This will all happen again the next time we have a big war—we are so stupid, it takes so many lessons before we arrive at the most simple facts.

We will now touch on a point that affects the meat-eating community. Those who studied the Board of Trade returns as regards agricultural live stock would note with apprehension the diminution of our live stock, and at the same time they will note that their butcher's bills are increasing in an unpleasant manner. It is said by the London Butchers' Society that the rise in meat is equivalent to a reduction in the working man's wages of 2s. per week. The people who will feel the pinch the most are those who have small and unfluctuating salaries. Together with this shortage of home-fed meat we have been obliged to close our ports to live stock from Argentina. Chilled and foreign meat, indeed, does come, but as long as there is the slightest suspicion of disease in that country the law is very plain as to our duty in keeping our ports closed. There may not at this moment be actual disease in Argentina, but Mr. Hanbury points out that the authorities of that country were allowing cattle to be landed on their shores from infected districts, and as long as that is so we must continue to protect ourselves by stringent regulation.

There is another set of good folk who have a grievance just now against Mr. Hanbury. Our Scottish farmers would like to be allowed to import from Canada young stock for the purpose of store. They, like us, complain of a shortage of home-bred stock, and they would fain supply the deficiency from over seas. So far, Mr. Hanbury is obdurate. He is by no means convinced that Canada can show a clean bill of health, and the result, were disease imported (as it easily might be, and has been many and many a time), would be most terribly disastrous.

From beef to milk. It is all this standard business that is causing the bother. Constantly some well-known, highly respectable farmer is being hauled before the justices for defrauding his customers of their proper percentage of fat in the milk. No account is taken of the fact that the morning's milk is always lower in fat than the evening's, and that if both milks were averaged the percentage would always exceed the legal standard. Only last week, in a leading agricultural paper, a farmer stated that inspectors are by no means careful enough in taking their samples for analysis. He instanced his own case, where the portion sent to him on being forwarded to an analyst came out at 6.5 milk fat. He knew himself that must be absolutely wrong, for on taking another sample the result was 3½ per cent. fat, much nearer the point. These sort of things are constantly occurring, and more often the result is adverse to the milk dealer. One is equally as unfair as the other.

Then there is another point which causes much soreness, and really is a great check to legitimate trade. We refer to the regulations respecting swine fever. We believe now the final referees are the members of the County Council, instead of, as in former days, the magistrates of the petty sessional division. Suppose there is an outbreak of swine fever in a certain county division; for the sake of argument we will suppose the outbreak is almost on the boundary line of

another county. The whole county division, be it ever so wide, is declared infected, whereas no difficulty is made respecting that county which is only separated from the infectious place by a few miles, but still out of the county boundary. There is at present an extraordinary scarcity of pigs for either breeding or store, and this will continue to be the case till the restrictions are tempered with a little more common sense.

By all means isolate and quarantine any suspicious cases, but make the cordon quite irrespective of county boundary. There is no magic in the imaginary divisional line. We omitted one little fact about the milk traffic. A dairyman is subject to visits from inspectors, who see that his stock is healthy and his buildings clean. His milk is tested, and he is pulled up sharply for any shortcoming. He must not sell milk if he should, unfortunately, have a case of infectious disease in his house. These regulations are all suitable and good, and we don't quarrel with them; but what we do object to is that milk may be sent to us from abroad—it is received, sold, consumed, and no questions whatever are asked.

Of course, it would be practically impossible to trace that foreign milk to its source, and even then we should have no *locus standi* to interfere; but if we had any say in the matter we would take good care that no foreign milk was put on our markets which did not first pay so big a toll as to make the business practically prohibitive. This sounds vindictive—perhaps it is, but we have still to learn why the gander should not be served with the same sauce as the goose.

One more word and we have done (not that the list is closed by any means). For the week ending October 4 (this year) the import of hops is 9,137 cwts., as against 425 cwts. the same week last year, and yet all these hops are allowed to be landed without tariff, or any restriction or regulation as to where grown and when, and other particulars which English growers are obliged to furnish or are subjected to pains and penalties. Is this right? We make bondmen of the home born and extend the freedom of breweries to every outsider. Verily this is Free Trade with a vengeance.

### Work on the Home Farm.

We have had a fine week, have practically finished Potato getting, and are now able to do something like a systematic threshing. Previously there was neither time nor suitable weather for the job, and when half a dozen neighbours are waiting for the machine it would be selfish to keep it long, so we have pushed on with the other work after threshing just enough straw for pressing needs. Now we have got the machine back, and are dipping deeply into the Barley stacks. So far the result is not unsatisfactory. The yield is fairly good, and there is less tail corn than was expected. The colour is fair, and much improved in the stack; it will be better still for a little longer sweat in the other stacks. Price is disappointing for good-class Barley. It should realise more than 28s. per quarter. The markets have been very slow owing to so much corn coming in out of condition, but there are signs of a better demand for the well got samples. There is certainly more inquiry. We ought to be thankful for having got our corn so well, and to be selling fair crops at 28s. for from information just received there is much grain still out on the high wolds of Yorkshire and Lincolnshire. One farmer in the latter county had 500 acres still in the fields a few days ago.

We have noticed a drill at work, and shall be using ours to put the ley Wheat in at once. The Potato land must be ploughed, and then it will be ready to follow on with. We shall sow 12 pecks of seed after ley, as the season is late, but only 10 pecks after Potatoes. Though it has been fine overhead, Potato gathering has been dirty work lately, and much soil has gone into the pies. A neighbour who got some Potatoes up one day and sent them to London the next, has quickly had a letter from his customer there reminding him that he has bought his Potatoes, not the soil of his farm. Those Potatoes were sorted by hand. If a riddle had been used there could have been no complaint.

The sheep are beginning to take well to Turnips, and now that we can spare an extra hand, the roots will all be cut for them. On the portions which they have grazed there will be some waste, as the hogs do not clean up the shells and the ewes are not ready to do it for them.

We fancy that unripe Turnips may have caused some of the losses amongst lambs (we, perhaps, should say hogs), whose delicate stomachs never could stand very green Turnip tops. If the tops are trimmed off a couple of days before use there is no danger.

The pigs are rejoicing in plenty of steamed Potatoes, and are doing well. The harrowings, as they are picked off the land, make grand pig feed. Sound Potatoes are cheaper than diseased ones for pig food even if they cost double the price.



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## Journal of Horticulture.

THURSDAY, NOVEMBER 13, 1902.

### Light, and Plants.

**B**EING fully aware of the importance of light in the growth of plants, one would think that the gardener would make it one of his first duties to become thoroughly conversant with all its properties. But it seems to be generally classed amongst those simple things that are too simple to need investigation. The study of light is most certainly the reverse of being simple, as throughout the entire course of physics there is no section more difficult to fathom—or more fascinating to read—than optics. It is by the analysis of light that we have become acquainted with the composition of other worlds and their surrounding atmospheres, and by a similar process some of the most complex compounds are accurately analysed, even though some of the component parts are extremely small in quantity. However, it is not to discuss the uses of spectral analysis that I make these notes, as they are made with the hope of impressing on those gardeners who are not conversant with elementary optics the importance of the study of light in plant growing.

Every luminous body emits its own peculiar light, but it is only with that light known under the name of daylight that I have to deal. We will take it in its simplest form—that of a ray of sunlight—and will at once analyse it. The result will be that the pure, colourless light from the sun will be found to be a magnificent compound light consisting of the following colours: violet, indigo, blue, green, yellow, orange, and red. To break up a ray of sunlight in this way is extremely simple, as all that is required is a triangular glass prism and a dark room. A small hole should be made to emit the sun ray, and the prism should be fixed in such a

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way that the ray falls on to it. If a screen is placed at some distance behind the prism it will be found that the ray, on emerging from the other side, will cast on to the screen, not a ray of clear light, but a band of the seven distinct colours named above, and in the same order, the violet being at the top. If one wishes to carry the experiment further they may again collect these rays and combine them as a clear ray again. This is done by arranging seven small mirrors on stands in such a way as each one reflects a band of the decomposed ray or spectrum, and then making the reflections all converge on one spot. Every object, unless it be black, reflects one or more of these colours, and absorbs the remainder. In the case of a green leaf, the violet, indigo, blue, yellow, orange, and red are absorbed by the leaf, and the green alone reflected. Thus, an object has no real colour, but only reflects a certain colour or colours. This may seem a strange truth to many, but it can easily be proved, as if the light is deprived of its green, the leaf no longer appears green, but is colourless or black.

To test this fact, a green plant may be stood in a room lit by a pure yellow light, when it will be seen that all the colours will be cut off, with the exception of the yellow, and all objects in the room not naturally reflecting a yellow shade will be black. In order that a plant may perform all its functions properly it must have the whole of the colours found in a sun ray, and to have any of them shut out is to have a marked effect on the condition of the plant. Those of an experimental turn of mind may care to take the trouble to grow plants under coloured glass and note the results.

For the benefit of those who have not the time to investigate the matter, I may say that under the effects of the colours of the red end of the spectrum the growth will be long and sappy, while the colours of the blue end encourage a very stunted growth. One often sees the green shading used. I am of opinion that this is one of the most unsuitable of colours, and I think my theory is well based and well supported, for most plants absorb all the colours but green, and if they reflect, and, therefore, when shaded with green all the essential colours are cut off, and only the rays that most plants refuse to absorb are allowed to pass. Under the influence of coloured light the functions of a plant soon lose their proper balance, and are thus prone to disease and an easy prey to insects. The sooty deposits on glass in the neighbourhood of towns have a very marked effect on plants, as, starting out as they do, many of the rays of the violet end of the spectrum, the growth is out of proportion owing to improper assimilation, and the leaves and stems very soon become excessively drawn and sappy if the conditions are allowed to continue. The gardener here has the remedy in his own hands; but in the case of a smoke fog he is powerless, as the smoke in the atmosphere cuts off almost all other rays but red, yellow, and orange, and thus overthrows the balance of Nature, and makes plants doubly sensitive to the chemical action of the smoky matter on their tissues.—J. G. COLE.

## Economy.

(Concluded from page 396.)

### The Up-keep Bill.

We—gardeners—have a grievance; no fanciful, ghostly thing, but a real, tangible grievance, when from economical or other considerations a loosely formed estimate of supplies is made to cover the gross total of expense. Whether it is the methods of modern living, or whether it is something else, which causes a falsely frugal sentiment to prevail it matters not; prevail it does, and that, too, in places where one would least expect to find it, for millions of money form no barrier to the *bête noir*. Bred, probably, in some poverty stricken garden, it spreads as rapidly as the Potato blight, until it reaches the rich man's table at such time as dinner parties are in vogue, and then, like a bolt from the blue, all sorts of questions are sprung, and very disagreeable ones, too, unless the man most concerned is prepared for a contingency which may arise at any moment. There is the visitor ironically known as "The gardener's friend" who flits from place to place, regarded by the visitors as an authority upon all matters horticultural; and the gardener, if wise in his own generation, sacrifices on the altar of hyper-criticism peace offerings of the best of his produce during the visit, all of which receive due meed of

praise, with the qualification that the Grapes, Melon, or Pine were rather better finished, higher in flavour, or slightly larger at the last place visited, amounting in the aggregate to "That faint praise which——" The gardener's friend is very well known to them, and rightly credited with making things uncomfortably hot; and once the ball is set rolling it gathers momentum that may take a mountain of hard facts to stop it. However, it sometimes rebounds from the last visiting place ahead, or "ahint," the sufferer being solaced by hearing that *his* produce was "rather better finished, a little higher in flavour, or slightly larger." Now and again, unfortunately but rarely, it ricochets to its manufactory, the dinner table, when, if all such opinions are not knocked on the head, the sting, at least, is extracted from the tale. Prior to the visit of a gardener's friend to one particular place the noble host was wont to smilingly say, "Quiz, your friend is paying us a visit; beware." Familiarity with that friend's (?) gardening opinions had at last bred the contempt they deserved from the master as they had at first from the man.

All of this is, of course, a little aside of our subject, but in direct relation to the disagreeable analysis another one makes of the cost of production. But recently a "rattling" bunch of Hamburgs, fully 5lb in weight, was dished up because Mr. So-and-so was coming to dinner; and very fine it was, although the grower says it. "What do you think of that, So-and-so?" said "His Honour," as he lifted the bunch by the nice little bit of nut-brown wood attached to show its proportions. "Ah! very fine, very fine; but look at what it cost you to grow it: all the firing, and all the men you have to keep; you could buy it cheaper." At first sight that bunch of Grapes cost a good deal, and from that view, which is nothing short of a moral squint, employers are apt to frame their estimates. It takes the second sight of a gardener to furnish the addenda which puts the matter in a totally different light; for that second sight sees the vineries now being prepared for the great Chrysanthemum crop, to be followed by a heavy batch of bedding plants, which are no sooner cleared than the temporary tables are filled with Maidenhair Ferns, and every inch of spare space utilised for something else. So, in the cost of production, there are many factors to be taken into the account; and under this head most men are able to show a very good balance to their credit, in spite of being further handicapped by the time, taste, and thought expended in keeping the houses clean and dressy—in fact, in that state suited to a gentleman's or nobleman's establishment. Under these conditions, which most employers look for and all gardeners invariably desire to have, it is, to say the least, unfair to draw comparisons concerning the cost of production between private and market growers, for between the two there is a great gulf fixed, which all the subtlety of logic educated people bring to bear upon it, and which, alas! gardeners are so deficient in, can never bridge over.

Important as is this phase of the matter, it is small compared with the general up-keep of an entire garden comprising the kept grounds and all pertaining to it—wherever, indeed, the gardener's foot goes and whatever his hand touches. Moreover, there are many moderate-sized places, and very good places too, in which frequent calls are made upon the gardener and his men for work wholly extraneous to their immediate sphere of labour. Probably most gardeners know all about this—at the time—and there are very good reasons for men to keep that knowledge in black and white ready for use in their hour of need. A diary of daily doings is a simple matter, but a safe one; and when a man is not able to speak for himself that will speak volumes for him. If weekly returns of produce supplied with its market value attached can be kept so much the better, and with an annual report and balance-sheet showing all these items on the credit side against the sum total of expenditure, the gardener will invariably be found to come out very well. Even cut flowers and furnishing plants alone form no inconsiderable item in many places. Needless to say that a honest, impartial report must be shown, for the value of all statistics depends upon their accuracy. Perhaps such reports and balance-sheets may never be wanted; if so, they need never be ostentatiously paraded, but rest quiescent on the shelf as a more powerful weapon of defence than all vague logic weakened by bad memory could ever be. In conclusion, some may ask what new lines under the head of up-keep have been thrown out for a struggling man to grasp wherewith he can further accomplish the desideratum of saving something without sacrificing to that hateful god, poverty? Men so situated may be able to say, honestly, they are already doing their utmost to give a maximum return at a minimum of expense, and that they can do no more. That is so; neither can—Quiz.

### Laburnum Flowers from Co. Dublin.

Mr. G. Carroth, gardener at Sutton House, Sutton, Co. Dublin, sends a number of Laburnum shoots clustered with flowers, and a letter as follows: "Enclosed please find sprays of Laburnum. The tree is in full flower for the second time this year, and is growing in the shrubbery in the elevated pleasure grounds of Andrew Jameson, Esq., D.L.; overlooking Dublin Bay. These gardens have a south-westerly aspect. This note may be of interest to the readers of your Journal." [In August we saw a Laburnum in flower at Edinburgh.—ED.]



### Cypripedium × Transvaal superbum.

Messrs. Sander and Sons, of St. Albans, exhibited a specimen of this hybrid before the Orchid Committee of the Royal Horticultural Society at the meeting of November 4th, and were accorded an Award of Merit. The parentage is *C. Chamberlainianum* and *C. Rothschildianum*, the former being very apparent in the long curled petals, as shown in Mr. G. Shayer's drawing below. "The upper sepals are pale green, heavily striped with chocolate colour; petals long and extended, pale green, spotted with dark purple; lip rose-coloured with yellow upper margin." It is a very attractive and distinct hybrid.

### The Week's Cultural Notes.

In most collections there are a few plants newly imported, and as a rule these do not settle down to their proper routine the first season. In consequence they require a little special attention. Some may not have finished their growth by the usual time, and these should be encouraged by rather more warmth than the species usually needs. Others may be too forward and in danger of starting secondary growths, and here, of course, the point will be to keep them dormant if it can be done by reasonable treatment; if not, to nurse the growth, so to speak, during the winter; not to hurry it, and allow the bulbs to finish in spring.

As a general rule, however, plants newly imported require, for the first year at least, more warmth than established specimens, and a kind of convalescent treatment to inure them to the altered conditions, and revive them after the trying journey from their habitat to the Orchid house. The early spring is, of course, the best time to obtain specimens newly imported, as they have then the summer to recoup themselves, but they are not always obtainable just when needed, and we have to make the best of them when they do come.

Cattleyas and *Lælias*, for instance, imported during the summer, are now, as a rule, beginning to root, and must have a little material to run in if simply potted in crocks, as they should be. An amount of care is necessary here; the least touch will rub the spongioles off, and even if it does not break the brittle roots, and once checked in any way it will die back to the stem. My plan in such cases is to have ready a few clean damp sphagnum points, and to lay these very carefully over the roots and between them; then to fill up with the Orchid mixture lightly, as, of course, the plants will previously have been firmed in the pots by stakes and ties.

The Belgian leaf soil, now extensively used for Orchids, is very useful in a case of this kind. Having a little rough moss over the drainage crocks the leaf soil may be simply sprinkled over the roots and filled in as usual, no dibber or other tool being needed, and consequently no damage caused to the roots. In either case water must be very sparingly applied afterwards, the roots at first being easily damaged by an over-supply. This precaution is not so necessary in the case of *Cypripediums*, the roots of these Orchids being more able to take up moisture in plenty.—H. R. R.

### Carnation, Duchess of Portland.

This new tree variety, which received an Award of Merit at the latest Drill Hall meeting of the Royal Horticultural Society, was alone staged by Messrs. Cutbush and Sons, of Highgate. Mr. W. J. Godfrey, of Exmouth, was wrongly mentioned as also receiving the Award for this Carnation.

## The Absence of Frost.

The year 1902 has afforded much that is not usual in its weather, almost, too, from its earliest inception, and at the time of writing there are conditions which certainly are not common in November. Summer flowers are still with us, and, it may be said, not in niggardly quantity or variety. Sweet Peas have been gathered in quantity in the first week of November, and should the present mild weather continue there will be other bounteous gatherings of these favourite summer flowers. Roses have been particularly good this autumn, so have Pentstemons from seeds. Dahlias are as free now as at any period of the summer or autumn in some gardens; *Phlox Drummondii*, *Mignonette*, *Marguerite* Carnations, and outdoor *Chrysanthemums* are still blooming quite freely.

This lateness of flower and crop may be adjudged a partial compensation for the blighting influence of the spring and early summer. Late Peas, French and Runner Beans, Cauliflowers, and tender-hearted Lettuce are crops that still give a supply, and for which there is much to be thankful for at this late period of the year. What is most to be dreaded is that should a change of weather bring sharp frosts, vegetation, so full of life and progress, will be hardly dealt with, for it is common knowledge that vegetables in free growth, following a mild period, are sometimes hopelessly ruined with one or two nights' frost.

Magnificent pictures are everywhere seen in the distant landscape. Beeches in particular being intensely bright. The prolonged period of tree leaf makes the removal and sale of young nursery stock scarcely so assuring as would be the case where maturity was more forward. Young trees now assume a luxuriance of the summer, and to dig them up and despatch to distant customers will need more than usual care, with a view to their satisfactory re-establishment and growth another year. This would apply to Apples and Pears more than to stone fruits. These

latter are now active in root-growth, which may be seen on lifting home-grown trees for replanting. There is no inconvenience attending the removal of young trees in the home garden in leaf for immediate planting.

because a ball of soil attached to the roots greatly facilitates progress in their new station, and the newly-formed autumn roots, with the aid of the water pot, proceed almost without a check.

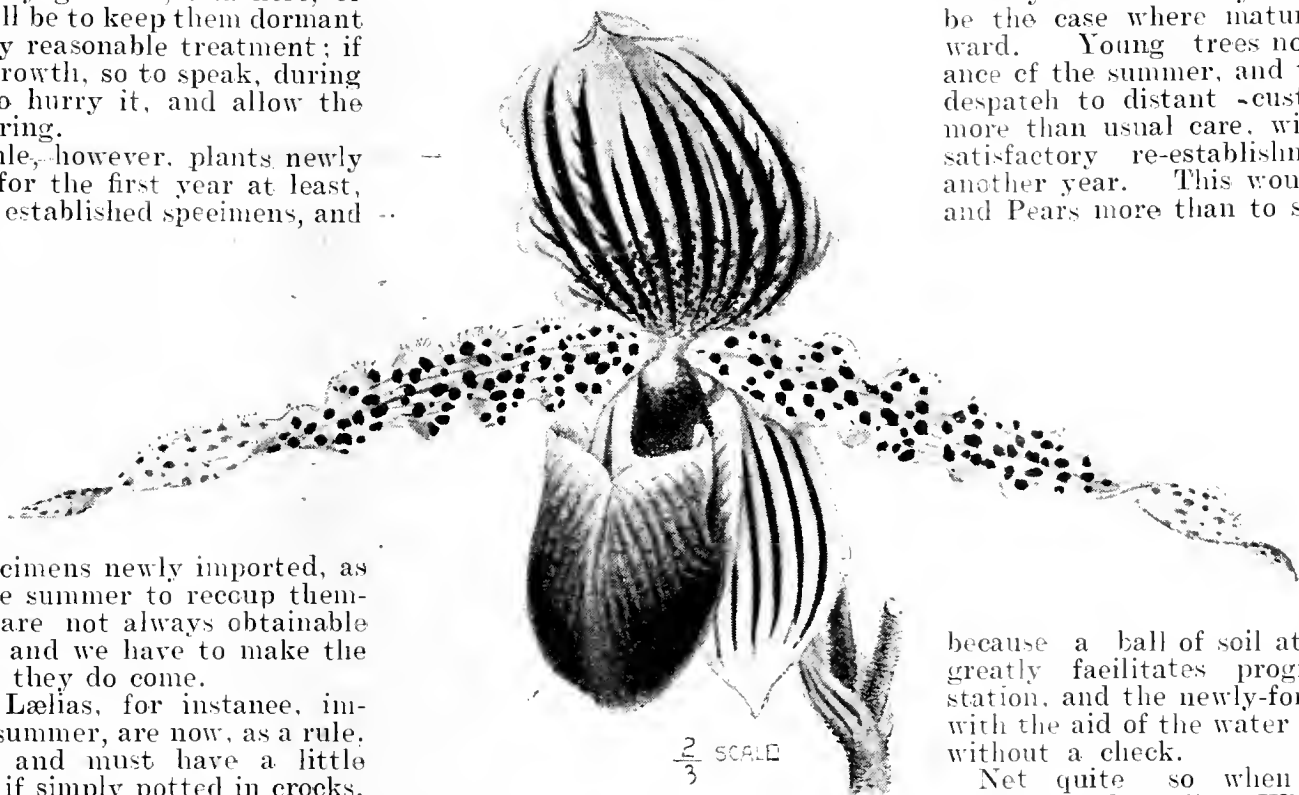
Not quite so when they have to be despatched by rail. When Nature supplies its expectant touch of winter, the leaves of trees respond quickly by their fall, and

fruit growers then look upon their state as a correct one. A few hours is sufficient sometimes to change a leafy and, to the ordinary observer, an unconditioned tree into that of a full-ripe specimen when sharp frost lays its icy breath upon them, followed by a cloudless sunray which plays its part later in the morning.

Some of the latest Pears and Apples are still awaiting their turn for removal to the fruit store, for it has been so often found that, gathered too soon, they have a small value when their natural season for use comes round. Late storing is the remedy for plump Apples in March and April, and in the case of open-air bush or pyramid trees they have been exceptionally favoured this autumn. In the effort to do justice to late sorts we have sometimes seen crops hopelessly spoilt by an unexpectedly sharp frost.

To northern readers this immunity may not be a familiar experience. In Scotland, at any rate, records point to frost of somewhat severe degree. In Wiltshire there has been in some places frost enough to destroy Beans, Marrows, and Dahlias, as well as other plants of tender nature, so much depending on the elevation of the ground. The autumn has been one that clearly points out the colder spots of the garden, judged by the influence of the frost on the tenderest leaf and flower. Such experience may be helpful for future planting, and is one not always so accurately gauged as in the autumn now fast merging into winter.—W. S., Rood Ashton.

[A contribution of magnificent Durendean Pears accompanied the foregoing notes. Heavier or better fruits, or of more beautiful colouring, could not be desired.—Ed.]



Cypripedium × Transvaal superbum.





### Roses in Pots.

For supplying cut flowers during winter and spring pot Roses are, I think, to be preferred to those planted out, because the supply can be regularly maintained by introducing batches into heat at intervals. Another advantage is that in April or May the plants can be placed in the open air, and the houses used for other purposes throughout the summer and autumn. Of course, I have nothing to say against planting out to cover a conservatory roof or the back wall of any other house, but to have a house planted entirely with Roses seems to me to be a waste of space, as it is easy to get an abundant supply of flowers from the open air during the summer months.

A variety of practices are adopted in regard to the time of potting Roses. The most usual course, perhaps, is to pot in June, before the plants are plunged in the open air. This plan answers admirably if the roots are pretty active and the soil well permeated with them; but if they are inactive, and the bulk of the soil drops away, the plants experience a great check, as there is usually some top growth going on. In all such instances I prefer to pot the plants during the autumn, and, indeed, that time answers well, no matter what the condition of the plants may be. Some cultivators do not repot until they have pruned, and are about to place their Roses under glass; but as top growth then commences before roots have pushed into the fresh soil, the best results are not often obtained under that system.

At the present time it is usual to heap plenty of ashes over the surface of the pots to prevent injury by frost. Before this is done I advise overhauling the whole collection, and repotting those which require it. When this is done white, active, young roots will generally be emitted at once; then if some of the plants are pruned and taken into heat early in January they will be in the right condition to start away strongly. From that time onward additional batches should be taken under glass every three or four weeks.

A simple compost answers well for potting. Here is one which I have found perfectly satisfactory. Three parts good loam with plenty of fibre (if stiff rather than light, so much the better), one part old cow manure passed through a sieve, or a similar quantity of fresh horse droppings. To a bushel of this compost add a five-inch potful of bonemeal, and half that quantity of soot. Use the soil in a fairly dry state, and pot firmly.

Those who require large quantities of Roses during April and May next may get highly satisfactory results from strong, young dwarfs lifted from the open ground at once and potted. Plants so treated must, of course, not be forced, but brought on gradually in an ordinary greenhouse temperature.

In the case of all Roses in pots I believe in hard pruning. First cut any old and very weak shoots, then shorten the remaining ones to within a couple of buds of their base, except in the case of a young shoot which is to take the place of a branch which has been removed, such a shoot, if necessary, being left to from 6in to 9in in length. The only difference I make in pruning Teas is to leave a little extra length on the strong shoots, cutting the weak and old ones completely away. This treatment, of course, applies only to those grown in pots. To get good flowers it is then necessary to confine the growth to a few buds on each shoot, because the plant has only a very limited amount of root room.—H. D.

### Seasonable Treatment.

Much of the young stock should now be in a vigorous state of growth. Give air and hereby obtain a healthy, hard growth, which will ward off mildew to a great extent. Of course, judgment should be used as regards ventilating. As a general thing the temperature should not be allowed to go above 72deg to 74deg on Bride, Bridesmaid and Golden Gate, but occasionally we have a day which is very windy, with the sun shining brightly. On such a day as this it is better to allow the temperature to rise

a little than to ventilate fully and thereby cause a strong draught. It pays to have a house under the care of a careful and observing man. Such a man will be able to help the stock in such cases. Although a thermometer is a safe guide in regard to heat and cold, we are sometimes obliged to vary from it when we see that our plants are in need of a little different treatment. For Bride, Bridesmaid and Golden Gate, each largely grown by marketmen, 58deg to 60deg is the proper night temperature, allowing it to rise to 70deg during bright days, when you can ventilate freely.

For Liberty I should advise no lower than 62deg at night. Of course this necessitates growing this Rose otherwise than in a house with Bride, Bridesmaid or Golden Gate. If grown with these varieties it is very liable to go dormant and prove a failure. For a day temperature 75deg is sufficient. This Rose has proved itself to be a stubborn one to force, and it is doubtful if it is a paying variety.

Messrs. Rochford and Sons, of Turnford Hall, grow large quantities of it, and speak highly in its praise.

During the dark days the temperature and the watering should have the very best of attention, such attention as only a careful and observing man can give. When syringing is done frequently, the top of the soil is liable to appear moist, while that near the bottom of the bench is too dry to promote healthy growth. A careful grower tests the soil often by digging down here and there through the house, so that he may know the exact condition of the soil around the roots. Syringe only on bright days, unless there is spider in the house, and in order to keep this pest in check direct the stream upwards, so it will strike the leaves from underneath, as this is where the spider does its work.

The first few crops to be cut are liable to come so that we cut quite heavily for a short time, and then there is a check and a period during which the cut is very light. It is at such a time as this that a careful waterer will aid the plants. During the time the crop is on, the plants will use a liberal amount of water; but after the crop is cut off be careful not to water as heavily, as they do not require it.

## Figs Under Glass.

### Early Forced Trees in Pots.

Where these have been placed in the open air they should be taken under cover without delay, as it is advisable to prevent the soil being soddened by the autumn rains. If the trees have not been top-dressed or repotted, or had the drainage rectified, this must be attended to without delay; the trees should then be placed in a dry, well ventilated, and cool house. Any thinning or cutting back of attenuated branches to give place for promising successional shoots must be attended to, and the trees washed with a solution of paraffin emulsion, one part in ten parts water, adding  $\frac{1}{2}$ oz sulphide of potassium, using a somewhat stiff brush at an angle, so as to dislodge scale if present.

To secure ripe Figs in April and May a well-heated and ventilated house is necessary, and is better with a pit or pits to hold fermenting materials. The pots should be supported on loose brick pillars at the proper height, and the fermenting materials brought up about the pots. The trees then root into the fermenting materials, and derive a considerable amount of nourishment therefrom; besides, they can be fed to any extent, and the trees be in comparatively small pots for their size and crop. Early Violet and St. John's may be grown for affording dishes of very early fruit, but Brown Turkey is the best for general purposes.

### Early Forced Planted-out Fig Trees.

The trees must now be unloosed from the trellis and pruned; those with the roots restricted to small borders, which are the most satisfactory in results, will require the shoots thinned where too crowded, cutting away the growths that have reached the extremity of the trellis and are not longer capable of producing fruit. Cut back to where the succeeding shoots start from the main branches, and remove old, bare limbs wherever practicable in favour of young and promising growths. Remove any elongated spurs, reserving such as are short-jointed and promise for fruit. The house should then be thoroughly cleaned, washing the woodwork with hot water, soap, and a brush, and the walls with limewash. Wash the trees with warm, soapy water, and afterwards dress with an insecticide; then secure the trees to the trellis, allowing room for the growth of the branches. Fork the border over very lightly, not injuring the roots in any way; remove the loose surface material, supply 1in or 2in thickness of good calcareous loam, or add a sixth of old mortar rubbish to good loam; then, or before growth takes place, add 1in thickness of well sweetened manure, and this will tend to keep the roots active near the surface and supply considerable nutrient matter. Ventilate the house freely at all times, excepting during severe weather, when a few degrees of frost will not injure the trees, provided the wood is thoroughly ripe and the soil only moderately moist.—GROWER.

## Old-time Gardening.

(Continued from page 239.)

### Gerarde and "The Herball."

Not by any means is a great deal known of Gerard. He was born at Nantwich, in Cheshire, in 1545, and died in London in 1611-1612, where he was buried on February 18 of that year. Of his parentage nothing is known, nor, though he was married, has any trace of his having left a family been discovered. He himself admits that his education was deficient, yet he attained to a very high position among his fellows, mainly, no doubt, on account of a plodding disposition, and a certain amount of "push," that led him on to undertakings that better qualified men allowed to pass. It is not at all unlikely that his qualifications as a surgeon were less conspicuous than his knowledge of herbs, which contemporaries admit was very great.

He was, however, apt to be imposed upon, even in the matter of plants, and more than one instance occurs in his "Herball" of, to say the least, a lack of acuteness and a facility to admit of deception that detracts somewhat from his character. I should imagine that his greatest forte would be as a gardener. We find him in 1577 established as gardener to Lord Burleigh, and he also possessed a garden of his own, which he calls a "little plot." In his own words, he claimed to "have added from forreine places all the varietie of herbes and floures that I might any way obtaine." Moreover, he challenged inspection of these gardens to afford a proof of his skill as a horticulturist.

In 1604 he rented two acres of ground from Queen Anne, for which he was to pay 1d. quarterly, and in the lease he is termed "Surgeon and Herbalist to the King;" but he held this garden only a year. However, the above affords an indication as to how he had prospered. Another means of forming an opinion as to his position may be derived from the people he knew and corresponded with. For example, he is found in the company of the Lord Mayor, "looking for springs." Lord Edward Zouch, Lete, a leading London merchant, Robin of Paris, Sir F. Crispe, and Lord Wotton are a few among many of the people with whom he claimed an acquaintance.

Gerarde's first literary undertaking was a catalogue of the trees, shrubs, and plants cultivated in his garden. These were 1,039 in number. The British Museum holds this, the earliest "hortus," but in 1876 Mr. Jackson issued 100 copies, with many notes and English names of the plants. This work, too, is now scarce. Gerarde's Catalogue appeared first in 1596, and again in 1599. Meanwhile, in 1597, "The Herball, or Historie of Plants" was issued from the press. This is admittedly the work of a Dr. Priest, who translated into English the *Pemptades* of Dodoens. After the death of Priest the manuscript fell into the hands of Gerarde, who made use of it without, however, stating to whom he was indebted, a practice not uncommon in those days. Material from other authors was incorporated, and not a little was added by Gerarde himself. If not the most trustworthy, it includes, at least, the most interesting portions of the work, the garrulous old fellow chatting away *con amore* as if all his readers were his most intimate friends. Local references are of much interest, and villages, long ago absorbed into the great metropolis, afforded in their several vicinities happy hunting grounds to the ardent botanist, adding, as he did, several plants, not hitherto noted, to the British flora. It is, however, to be regretted that he allowed himself to be deceived—some think he practised deception himself—as in the case of the *Pæony*, which he records as growing near Bristol, the red Rose in a field in Cheshire, and, to crown all that, he himself had seen young Barnacle geese as plants, growing on a plank of wood!

But against these absurdities there is a vast mass of material absolutely novel, and, withal, worthy of all credence. From his remarks on the Potato it would almost

appear that he secured roots from Virginia by Lane's expedition, and these he cultivated. He also tried to cultivate Cotton from seeds, but unsuccessfully, though it "did grow verie frankly." At the time "The Herball" was passing through the press, "Master Nicholas Lete" had sown several pounds of seeds, but Gerarde seems, from his own experience, to have been sceptical of the Cotton plant flowering in England. Then, from the gardener's point of view, Gerarde did an immense benefit in directing attention to the new bulbous plants which were emanating from Constantinople and other eastern parts. Of these mention may be made of the Tulip in variety, various *Liliums*, *Narcissus*, Crown Imperials, and *Fritillaries*. Then, shrubs may be said to have been unknown till Gerarde directed attention to them. He cultivated, among others, *Cercis siliquastrum*, *Ceratonia siliqua*, *Bupleurum fruticosum*, *Viburnum Tinus*, *Syringa vulgaris*, *Sambucus racemosus*, *Spartium junceum*, and *Colutea racemosus*.

*Staphylea colchica* seems to have been somewhat of a rarity, as he mentions the places it was to be found—viz., "at the house of Sir Walter Culpepper, neere Flimwell, in the Weild of Kent, as also in the Frieryard without Saint Paule's Gate in Stamford, and about Spalding Abbey, and in the garden of the Right Honourable the Lord Treasurer, my very good Lord and Master, and by his house in the Strand. It groweth also in my garden, and in the garden hedges of Sir Francis Carew, neere Croydon, seven miles from London." He goes on to say: "It is called in English S. Anthonies nuts, Wild Pistacia, or Bladder nuts; the Frenchmen call it *Baguenaudes* a *patrie nostres*, for that the Friers do use to make beads of the nuts." Then, referring to the commoner fruits, we discover that he cultivated several kinds of Peaches, of which the "yellow" was considered that possessed of the finest flavour, that Apricots grew in his own and "many other gentlemen's gardens throughout all England." Of Pears and Apples he declared (and also of Plums) that each would require a separate volume.

In connection with Pears, reference is made to specialists, where he says: "All these—specified and many sorts more—are growing in the ground of Master Richard Pointer, a cunning and most curious graffer of all manner of rare fruits, dwelling in a small village neere London, called Twicknam." "Mr. Henry Banbury, of Touthill Street, neere Westminster," is also mentioned as an "excellent graffer and painfull planter." From these examples, taken quite at random, it will be seen that Gerarde is an author of many fancies, with whom a pleasant half-hour can be spent very pleasantly.

"The Herball" was "very much enlarged and amended by Thomas Johnston, Citizen and Apothecary of London," in the year 1633, a reprint following in 1636. The new editor was very hard on poor Gerarde, as well on account of his mistakes as because he had been so little straightforward as not to acknowledge to whom he was indebted for the major portion of the material of which his book was composed. Of Johnston's work, as a whole, it may be said that it was largely an endeavour to bring Gerarde's original work up to date.

Following as it did closely after Parkinson's "*Paradisus*," a book like that under discussion, a masterpiece of its kind, it would most likely hardly have been heard of, but for the man whom Johnston pilloried. A specimen of the latter's style is here given, taken from the chapter on Tulips. He says: "I do verily thinke that these are the Lillies of the field mentioned by our Saviour (Mat. vi. 28, 29), for he saith 'That Solomon in all his royaltie was not arayed like one of these.' The reasons that induce me to thinke thus are these: First, their shape, for their floures resemble Lillies, and in these places, whereas our Saviour was conversant they grow wilde in the fields. Secondly, the infinite varieties of colour, which is to be found more in this than any other sort of floure; and, thirdly, the wondrous beautie and mixture of these floures." Johnston was the authority from whom subsequent writers procured the erroneous date of Gerarde's death—"about 1607"—instead of the date given at the beginning of these notes. The correction first appeared over the signature "G" in this Journal in the number for February 18, 1875, in an article of the greatest interest on Gerarde.—B.

(To be concluded.)





### New Japanese Varieties.

The Japanese section of Chrysanthemums increases so fastly in variety that a yearly addition must be made even to the smallest collection to keep it anywhere nearly of an up-to-date character. Where so many new varieties are introduced from such a number of sources it naturally follows that all are not equally meritorious. For those cultivators who have not the opportunity of inspecting the new varieties as first seen, I have compiled my annual selection of those I consider worthy to be added to any collection.

**CHELTONI** is a sport from that favourite white flowered Australian raised variety, *Nellie Pockett*, which for growing into specimen plant size or dwarf plants for decoration, as well as for cut blooms, it is equally useful. The newcomer is an exact imitation of its parent except in colour, which is a deep golden yellow. (Wells, Redhill.)

**MRS. ALEXANDER MCKINLEY** has narrow florets, drooping slightly in a graceful manner. The colour is pleasing, being yellow suffused with red. In growth it is of a sturdy habit, and not more than 5ft.

**MR. F. S. VALLIS** was raised by M. Calvat, and which is regarded as one of his finest introductions. The florets are of medium width, semi-drooping, and the flower is remarkably well built up in the centre. The colour, too, is distinct and pleasing, being a deep yellow, fading with age to a softer tint. I look upon this as quite one of the best of this season's novelties. Grown in a natural manner it is not more than 5ft high.

**S. T. WRIGHT** attains a large size in diameter; it is fully 9in and quite 5in in depth. The colour is pleasing crimson with a suffusion of purple, with a golden reverse. (Wells.)

**MAY INGLIS** is another of Mr. Pockett's introductions, growing to an immense size—9½in in diameter. The florets are broad, drooping slightly. The colour is somewhat difficult to describe. A pale yellow base, striped and flushed with rose in the early blooms. Later this colour is replaced by red or crimson.

**MRS. T. W. POCKETT** is not a giant in diameter, but it is a flower of excellent proportions. 7½in by 6in, thoroughly well built up. The narrow florets are irregularly twisted, split, and forked at the tip. The colour is rich yellow. This variety has been likened to *G. J. Warren* in style, but this is quite an error. It bears not the slightest resemblance to that variety in any manner, being entirely distinct from anything I know.

**MRS. HARRY ENMERTON** is in colour—chrome yellow—a pleasing variety. The long drooping florets are a trifle weak in the centre, at their base inclining to show a want of fulness. This defect may be prevented by catching the flower at the right moment.

**MADAME PAOLO RADAELLI** is quite one of the best of recent introductions as an incurving Japanese. The blooms are remarkably well built up, having broad, substantial florets. When early developed the colour is pale pink; later blooms flushed with rose. This variety should be added to every collection no matter how small.

**MAFEKING HERO** was sent out this spring by Mr. Godfrey, and it has well borne out the high opinion formed of it last November by those who saw it. The blooms, when fully developed, measure 9in in diameter, carrying a depth of quite 6in, which is a good proportion. The colour is dull red, the reverse being gold. The tips freely turn upwards, giving added character to the flower.

**MADAME WALDECK ROSSEAU** is one of the finest of incurving Japanese blooms in existence at the present time. The broad bronze red florets show to perfection on fully developed blooms. The inner surface when seen is a rich amaranth crimson. Under some methods of culture the bulk of the florets are reflexed. *Sensation* was first seen last season, and has this year fully borne out all that was said of it then. The broad flat florets are golden yellow,

flushed with crimson. *Earl of Harrowby* has long twisted florets, rich red in colour, and quite an attractive variety.

**MISS MILDRED WARE** in its formation resembles both *Vivian Morel* and *Madame Carnot*, but not either distinctly; but being between two such sterling varieties it cannot fail to become a favourite. The colour is distinct and attractive—crimson flushed with brick red. (Jones, Lewisham.)

**LADY MARY CONYERS** has loosely incurving florets, the surface colour being rose, the reverse a silver tint.

**GENERAL HUTTON** is truly a magnificent variety, having long loosely incurving drooping florets. The base colour is yellow faintly striped with red.

**LORD HOPETOUN** is of Australian origin, having long narrow florets of a semi-drooping character. The colour is an intensely rich crimson with a gold reverse, which is, however, seldom seen.

**MARY PERKINS** has long narrow incurving florets of a deep canary colour. The blooms are fully built up, making a handsome blossom. (Jones)

**MRS. E. HUMMEL** is shrimp pink in colour. The incurving florets coil in a peculiar manner, giving it a striking appearance.

**DUCHESS OF SUTHERLAND** reminds one very much of *Golden Dragon* in its best days. The broad florets are exceptionally long, drooping and curling inwardly. The colour—rich yellow—is very striking. In size it grows fully 9in in diameter and as much as 6in deep.—E. MOLYNEUX.

### The Collection at Heywood, Wilts.

Though no longer a patron of the exhibition hall as a competitor, Mr. Robinson still maintains his credit as a grower and competent judge of Chrysanthemum blooms. His collection at the present time comprises a preponderance of the Japanese section; incurved are fewer in numbers, and the Anemone and reflexed sections have been entirely abandoned. For home displays, however, the Japanese are infinitely the better for giving effective colour, boldness of character, and more variety, so that the absence of two sections and lesser extent of incurved are not likely to cause depreciation in the purpose for which they are needed. Among the newer kinds—and Heywood has long since been noted for its up-to-date selection—are some noble flowers and varieties, which, it may be said, are destined for further future use.

Mr. Godfrey's well-known set have, in the main, turned out admirable, and some of the Earlswood novelties are not one whit the less noteworthy. From the latter source Lord Alverstone stands out conspicuously as a very fine flower. Its depth of crimson colour, width of petal, and healthy constitution render it one likely to have a future before it. Mrs. E. Thirkell, too, had some immense flowers; as also had Duchess of Sutherland and General Hutton, both yellows, quite distinct in character. *Mdlle. Maria Liger* may be best described as an improved *Good Gracious*. *Matthew Smith* gives a pretty blend of crimson and gold, and quite an attractive flower. *Mafeking Hero*, *Henry Barnes*, *Earl of Arran*, *Charles McInroy*, dark chestnut crimson; *Guy Hamilton*, *Nellie Stevens*, *Henry Stowe*, strongly resembling the old *Belle Paule* in its best form; *Marquis V. Venosta*, *M. L. Remy* (fine), *Madame L. Remy*, *Madame Von Andre*, excellent. Lord Ludlow remains as youthful as a seedling both in colour, perfection, and vigour. Mrs. G. Mileham, Rev. W. Wilks, Ernest Bettisworth, Mrs. J. W. Barks, Mrs. J. J. Thorneycroft, Godfrey's *Sensation*, *Masterpiece*, pretty; Godfrey's *Pride*, *Queen Alexandra*, *Edward VII.* (the latter not being so striking in colour as some others); *Mutual Friend*, very pure; *Hairy Wonder*, W. R. Church, extra fine in colour and form; and *Edith Tabor*.

With these are *Madame Ed. Roger*, Wm. Higgs, and *Louisa Giles*, three interesting incurveds; *Jane Molyneux*, large and spreading; *Lily Mountford*, *Rayonnant*, old, but still deserving; *N.C.S. Jubilee*, and last, but not least, *Calvat's Sun*. This was an immense flower, beautiful in its clear yellow, and graceful character. The foregoing naturally include only those which happened to be on view at the time of my visit. There were others which are later, and naturally some that had already found a purpose in the decoration of the house.

Chrysanthemums were the favourite flower of the late Lord Ludlow, and received from him a liberal patronage; and this promises to be still fully maintained by J. W.

Miller, Esq., who has recently come into residence, and who has already found in Mr. Robinson an expert worthy of his confidence.—S.

#### The Last November Show of the N.C.S. at Royal Aquarium.

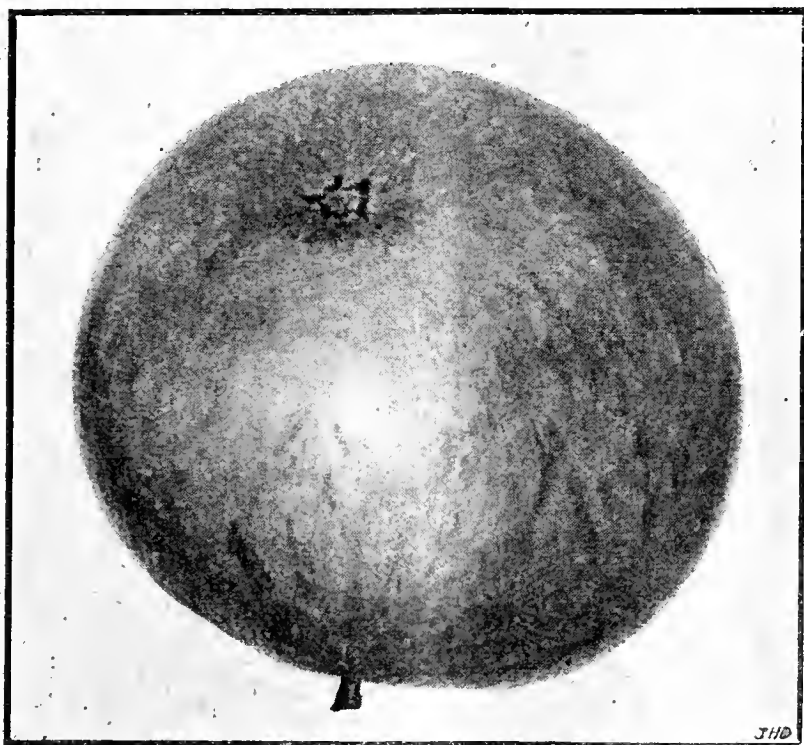
We are told that the last November show of the National Chrysanthemum Society has been held in the Royal Aquarium, London. Considering the kindness that has always been shown to us by Messrs. Ritchie and J. W. Wilkinson, and all their staff, we owe them a debt of gratitude. They have at all times met us with smiling faces, and never failed to give us exhibitors all the aid that lay in their power.

I remember the spot before ever the building was thought of. I watched its progress—then called a "London Winter Garden"—and also remember its first gardener, the late Mr. J. Wells, who assured the public it always would be full of flowers, but with the obscure light from an opaque roof, both the flowers and the fishes gradually vanished. Their place was supplied by the remaining portion of the original Stoke Newington Society, which had been located a few years in the Borough of Hackney, and had its committee room at the Four Swans, Bishopsgate, and afterwards this society and its shows migrated to Westminster.

I exhibited at Hackney, and of course also at the First Chrysanthemum Show in the Aquarium, and I have continued to do so ever since. The premier show had a good run, and at each succeeding show the exhibits increased, and the style of exhibiting and size of Chrysanthemums have been wonderfully improved upon. Southwark then held its shows not far off. Their committee complained of the Hackneyites poaching, and as a remedy I suggested to Mr. W. Holmes that it was time we should change the title of our society and call it NATIONAL, but when this proposition was brought before the committee the president (the late much respected Sir E. Sanders) denounced it determinedly, and he had many followers who were much devoted to the neighbourhood of its origin. However, Mr. Holmes, the first and much esteemed secretary, used great influence and weight, and the more ambitious title was ultimately adopted, and ever since then the society has gone forward by leaps and bounds. During all this time there has been a representative exhibition of Chrysanthemums worthy of this great nation. I only remember having been absent on one occasion from the whole series of exhibitions, and certainly never missed a November show. I have been especially fortunate in securing many high awards for exhibits from Swanley, and at these numerous meetings I have made many friends.—HENRY CANNELL, V.M.H.

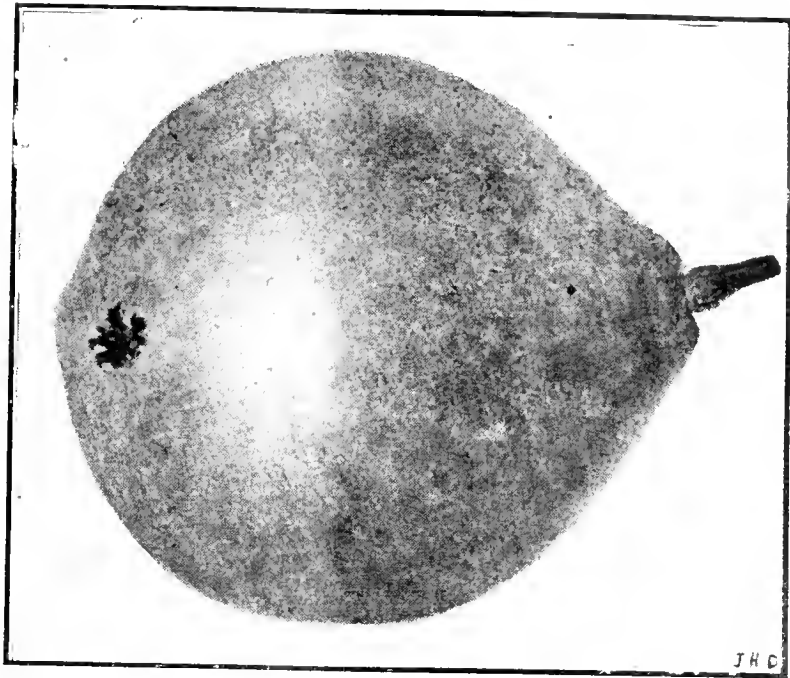
#### At the Exmouth Nurseries.

Perhaps never in the history of the Chrysanthemum has it been the good fortune of any one raiser to offer such a magnificent collection of seedlings in one season as Mr. Godfrey did last year.



Apple, Edward's Coronation. (See page 451.)

On entering the large Mum house we exclaimed, "What a glorious sight!" for about 100ft in length was one blaze of colour, and in this house were all the novelties. Mr. Godfrey may well be proud of Godfrey's Pride; it is an immense bloom, without the least coarseness. The florets are broad, smooth, and of great length; slightly whorled, forming a good, solid, handsome flower.



Pear, Eyewood.

The colour is quite distinct, being a reddish carmine-crimson, with a lighter reverse. The plant is of good healthy growth, and of medium height, while the growth of all the seedlings are marvellous. Almost every variety has strong, sturdy growth, and the foliage is leathery, and of a healthy dark green colour. Every bloom seems to come with ease. Not one did I see with a hard centre.

Further down the house we come to Godfrey's Masterpiece—a lovely flower. One might call it a very large Indian-red form of Mons. Chenon de Leché, which just shows the tip of the florets with a rich golden yellow. Queen Alexandra is the most distinct variety I have seen. The colour is a delicate fawn or buff, flushed with carmine pink. Golden Eagle, an immense bloom: colour, a distinct shade of chrome. Exmouth Crimson, a large flower of excellent form, very distinct, and one that will be much in demand. Edward VII., a large handsome bloom of a claret crimson shade; quite distinct from any other variety.

Another most lovely flower is Bessie Godfrey: clear canary yellow, deepening towards the centre. Very large, deep bloom. Godfrey's Triumph: This is a seedling from Mons. Chenon de Leché. The form of flower is very superior, the petals being more recurving, showing the flower almost a perfect solid and rich ruby crimson.

Other seedlings noticed as of exceptional merit were Sensation, The King, H. E. Hayman, Wallace, E. Vowden, Nellie Stevens, Exmouth Rival, and dozens of unnamed seedlings full of promise.—G. FOSTER.

#### Pear, Eyewood.

Eyewood is a shapely little dessert Pear, good as a standard, with fair average bearing qualities, and spoken well of by those who know it best. Many of the trade growers, however, fail to catalogue it. At Chiswick it is cropping well this season, and specimens have reached us for name from various parts of the country. It is in order to bring this variety more prominently forward at this season that our notes and illustration of it are now published. In describing it in his "Fruit Manual," Dr. Robert Hogg supplies the following facts: "Fruit, below medium size, 2½in wide, and 2in high; Bergamot-shaped. Skin, very thick, green on the shaded side, becoming greenish yellow tinged with brown next the sun, and very much covered with pale brown russet, and large russet dots. Eye, small and open, slightly depressed. Stalk, 1in to 1½in long, slender, inserted in a small cavity. Flesh, yellowish, exceedingly tender and melting, very juicy, with a sprightly vinous flavour and a fine aroma. A very excellent Pear; ripe in October. The tree is very hardy, and a good bearer. Mr. Luckhurst finds it only second-rate, and Mr. Blackmore says it is 'small, of poor quality.' This was raised by Mr. T. A. Knight, President of the Horticultural Society, and was named after Eyewood, near Kington, in Herefordshire, and not, as has been stated, on account of the peculiar woodiness of the eye. Mr. Knight named all his seedlings after the residences of his friends."





### A Letter from Calcutta.

"MY DEAR JACK,—It is with fear and trembling that I pen this note to you, as no doubt by this time I am almost beyond your forgiveness for not writing to you beforehand, and especially as I promised to do so before leaving England. However, I won't fill this sheet with excuses, but really the time seems to fly since I came here, and having to leave England a week before I expected, my departure was rather hurried. I arrived here all right after a fairly pleasant voyage. . . . I am pleased to say the hot weather is practically over now (22-10-02) without my having had any bad effects from the same. Last month was the worst of the lot, because the soil being so very wet, owing to the heavy rains in July and August especially, the hot sun caused the atmosphere to be exceedingly moist. At nights one would perspire with only a sheet over one. However, for the next four months the Bengal climate is said to be a lovely one, and I am looking forward to something better.

"The growing period of the vegetation is practically over, and everything is looking its best in the way of foliage. The spring is the time when most of the plants flower, but of course there is always something in bloom, and some plants flower almost all the year round. Brownias, Amherstias, Lagerstræmias, the lovely Poinciana regia, &c., flower in spring and early summer. Many Palms are now in flower. Oedoxa regia, of which there is here a fine avenue, is throwing out its large flower spikes.

"The grandest plant in flower for some time has been Colvillea racemosa. It is a tree growing to a height of 50ft or more, with rather a long bare stem; the branches spreading in a drooping manner from the top. These latter have been for the last fortnight furnished with many large racemes of small, orange-red flowers—really a brilliant sight from a distance. There is also a lovely tree of Kydia calycina in flower. The long panicles at the end of every branch are presented in much the same manner as Hydrangea paniculata. In fact, when I went up to it and casting a casual glance, the clusters reminded me of that plant very much. Taking into consideration the bushy habit of the tree, and its height—30ft or 40ft—you can imagine what a lovely sight it is. It has to be seen in the morning, however, as the flowers soon fade. It would be about seven o'clock when I looked at it, and hundreds of bees and butterflies were swarming amongst the pinkish white flowers.

"Antigonon leptopus is one of the prettiest climbers I have seen here. One half of the roof of one of our plant houses is covered with it, and for the last six months, it has been constantly in flower. There are two varieties, a white and a pink one, and all day (but best in the morning) the roof is a mass of white and pink. Crotons are at their best, as they have made their summer's growth. Dracænas have also fine foliage. Allamandas and Ixoras have been flowering all summer, and Begonia magnifica is flowering well. I saw an article recently about the Amherstia nobilis. We have a fine avenue of it, and during March and April it is a fine sight. It seeds here, but not freely, and we have raised two or three dozen seedlings. A drawback as regards the seed, and one which, no doubt, renders it scarcer in other countries, is that they lose their vitality within four days after falling from the tree, so that immediate sowing is necessary. We also raise them from layers, and by this method we get earlier flowering plants.

"The way we layer them may be interesting to you. A good strong bamboo cane is fixed into the ground, the top coming in close contact with the branch to be layered. It is then split four or five times from the top down about a foot, and a pot of soil is firmly fixed in the centre. The branch is layered into this about May or June. Until the rains start in July these require watering, and by the end of September they are rooted and ready for the nursery, where they are kept until next rainy season, the time for planting.

"Next to this avenue of Amherstias we have one of Brownias. These flower about a month earlier than the Amherstia, and for beauty rival the latter. I came across a large patch of Exacum zeylanicum in the grounds to-day. It was growing amongst the long grass, and would be considered as jungle here. In my list of plants in flower I should also mention Cassia glauca, which is a lovely sight, with clusters of yellow flowers at the ends of the branches. I should include Cassia grandis, although it does not nearly come up to the first as regards flowers, but is a larger and generally a finer tree.

"Several of the trees are beginning to lose their leaves, as most of them do in the cold season. There is a difficulty keeping grass down in the rainy season; it grows so fast. We have always eight to ten mowers working, as well as a mowing-machine, such as they have for cutting hay at home. The flower

garden foreman, or mallee, is busy getting his place ready for the cold-weather bedding, which would be called summer bedding in England. Seeds are obtained from English nurserymen, and the usual summer annuals, Pelargoniums, and such like, are obtained from Darjeeling, as it is impossible to keep these in Bengal during the hot weather. I have not, as you know, had the opportunity of seeing the flower garden at this season, but I am told the plants grow and flower exceedingly well; and what with the lovely climate and such a variety of plants which can be utilised, the flower garden might well be a beautiful sight. There are a fine lot of Orchids here, but few are in flower at present. A batch of Vanda cærulea will soon be on view. I was looking at them to-day, and saw that there was a fine lot of spikes.

"Well, dear Jack, I fancy I might go on for another hour describing the plants here, but I shall leave something for a future time. My work is principally looking after the work-people. We have at present on the books about 100 coolies, 50 women, 20 mallees, or gardeners, and 30 boys."—ERNEST.

### Chrysanthemums at Westbury.

There seems ample justification for the exception taken on page 389 in regard to the merits of the variety Margaret Marwood. In Messrs. House's nursery, as I intimated, there are such a great range of variety, many good, others indifferent, that in a hurried inspection it is not a difficult matter for one error to be made in the case of variety. Inquiries of the Messrs. House elicit the remark that they have thirty better sorts, and the commended one being so closely contiguous to the one for which commendation was intended—Shasta—accounted for the slight confusion of tallies. This is the best, freest, and dwarfest of the whole range of Moon Daisies, another excellent one bears a popular title—Lord Roberts.—W. S.

### Vegetable Pests.

I noticed an article in the *Journal of Horticulture* last week, page 403, headed "Vegetable Pests," and signed "John Rylance." If Mr. Rylance will take a small stick and make a hole on one side of the Cabbage affected, about 3in deep and 2in or thereabouts from the stock, and put half a teaspoonful to a teaspoonful of paraffin oil into the hole, the quantity to be regulated according to the state of the soil, the paraffin will permeate through the soil, and as soon as the plant is reached the pest will "tak' the road." It is not too late to apply the remedy so long as there is life in the plants; but, of course, when the plants are so far gone it will be longer before they get into health again. Intelligently and judiciously applied, nothing but good will result from the application.—J. F. L.

### Tomatoes for Early Fruiting.

In a recent issue of the *Journal*, September 11, page 251, I note "J. H. W." advocating the removal of the anthers as a means of pollination of the Tomato in winter, a process with which I have had no experience, and it may prove better than my suggestion, which I offer if accepted. Some years ago, when a foreman, I had tried different ways of pollinating Tomatoes without much success, and being advised by a friend to get some cow manure, which I did, and put about a 6in potful, 2ft or 3ft apart, convenient to the pipes, and covered it with a little dry soil, and in a few days small flies by the hundred appeared, when the manure would be turned or shifted. The flies made friends with the Tomato flowers with fairly good results. The smell from the manure is anything but pleasant for a time. Having tried the above several times since, I have had no trouble in getting a fair set.—J. M. C., Ballyarthur, Woodenbridge.

### Fruit Trees Pruned or Not Pruned at Planting.

If your correspondent, Mr. A. Petts, is of opinion that he has thrown light upon the controversy on this point, I can only say that the light has not dawned upon me yet. In one place he says: "Thus we see the working of this general principle—cutting back a newly-planted tree induces vigour of growth; leaving them unpruned leads to fruitfulness (and probably unsightly naked branches) even before the tree is strong enough to support it." In another place he writes: "Deferring the cutting back of the trees till after a season's growth adds to their vigour of growth." If these two sentences are not directly contradictory I do not understand the English language.—OBSERVER.

P.S.—Will any reader who grows Cob-nuts tell me whether the trees should be cut back when planted, and, if so, to what extent?

# NOTES & NOTICES

## Royal Appointment.

Messrs. Richard Sankey and Son, Limited, Bulwell Potteries, Nottingham, makers of the Sankey garden pots, have received the Royal Warranty as manufacturers to His Majesty the King.

## The Sutton Christmas Rhubarb.

We omitted to state in our report of the R.H.S. meeting on November 4, that the Sutton Christmas Rhubarb exhibited by Messrs. Sutton and Sons was given an Award of Merit by the Fruit and Vegetable Committee.

## Horticultural Benefit and Provident Society.

The usual monthly committee meeting of this Society was held at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday evening last. Mr. C. H. Curtis presided. Nine members were reported on the Sick Fund, the amount of sick pay for the month being £31 7s. 2d. Seven new members were elected, making a total up to the present time this year of eighty-six. The secretary was authorised to obtain 3,000 circulars for distribution.

## School Closed for Potato Lifting.

The School Board of Kirkbean (N.B.), in the Stewartry, have closed the public school for a fortnight to allow of the Potato gathering—a method adopted to save the average attendance. Kirkbean is a well-known district for Potatoes, and during the gathering of the crop all available hands are employed. The majority of the School Board are farmers.

## British Therapeutical Society.

The purpose of the new British Therapeutical Society is to determine the medicinal properties of all kinds of natural products. Especial attention will be given to plants locally credited with curative powers, and it is expected that many substances of value will be found.

## The Carriage of Fruit.

A deputation representing some of the principal fruit-growing counties has waited on the general managers of the principal railways in London to urge on them the necessity for improvement in fruit transit. The deputation was arranged by the National Fruit Growers' Federation, and was introduced by Colonel C. W. Long, M.P., its president. The points urged were a better system of loading, quicker delivery from terminus to market, and more prompt return of empties, refrigerator cars, and covered trucks, uniform mileage rate for fruit, and a more favourable interpretation of owners' and companies' risks. The managers' chairman promised that the proposals should receive careful consideration.

## Vallota purpurea.

The Scarborough Lily is to-day represented in many gardens by a potful of crowded bulbs, these being left well alone, and should they blossom forth and furnish the beautiful crimson amaryllidaceous flower scapes mayhap their reward will be a better position on the plant stage until such time as they die down again, whence the bulbs are more or less neglected. This does not obtain everywhere, and many gardeners bestow considerable attention on their batches of *Vallota purpurea*. Good bulbs are an imperative necessity if the best flowers are expected. The potting is usually accomplished during February or early March, 6in or 7in pots being used. All small bulbs adhering to the parent ought to be taken off, to be placed in pans and grown on. The apex or neck of the bulbs should be level with, or slightly above, the surface of the soil. When growth begins the plants should be placed on an airy greenhouse shelf, where they may well be kept until about the flowering time, which is varied, according to the grower's desires. Good bulbs potted very early in the year are flowering now, or a little earlier than the present, and others flower from May throughout the summer. In the mildest parts of the country this plant succeeds out of doors, and is treated like the *Belladonna* Lily. An illustration appears on page 453.

## The Royal Gardeners' Orphan Fund.

The Right. Hon. the Earl Carrington has kindly consented to preside at the next anniversary festival of this charity, which will take place at the Hotel Cecil on Tuesday, May 5, 1903.

## Ipswich Mutual Improvement Society.

The latest meeting of the above association, held on November 6th, was devoted to the consideration of the seasonable subject of "Spring Bedding." Mr. J. Battram, of Oaklands Gardens, Ipswich, introduced the subject with a very able paper. Dutch bulbs, Wallflowers, Polyanthus, Myosotis, Arabis, Alyssum, Silene, &c., were mentioned as particularly adapted for planting in borders and beds. Concise instructions were given for the preparation of plants for spring bedding, together with many useful hints as to grouping with regard to colour. The discussion was opened by Mr. Cotton, and sustained by the chairman (Mr. W. Chandler), Messrs. Morgan, A. Creek, Close, &c.—E.

## Yeovil Begonias.

Messrs. B. R. Davis and Sons, Begonia specialists, Yeovil Nurseries, Somerset, were able to send to us a large boxful of selected tuberous Begonia blooms, from plants in the open air, a week ago. They remark, "We think you will agree with us that it is a remarkable season which permits such flowers to be gathered so late in the year, and is a tribute to the value of the Begonia as a bedding plant. Of course, the flowers are smaller, but the colouring is very bright." The colouring was certainly intense and rich, the size and substance of many of the blooms being little inferior to the best plucked in summer's heyday.

## Apple, Edward's Coronation.

This variety was exhibited by Mr. H. C. Princep, gardener to the Hon. H. B. Portman, of Buxted Park, Uckfield, Sussex, before the Fruit Committee of the Royal Horticultural Society, on October 20, when an Award of Merit was accorded to it. Our illustration on page 449 depicts the exact size of a typical specimen, though some are larger and some smaller. It has one side rather heavier or more developed than the other. The skin is greenish yellow, streaked and mottled red on the side next the sun; eye set in a round depression, somewhat deeply, and wide; stalk straight, stout,  $\frac{1}{2}$ in to  $\frac{3}{4}$ in long, in deep round cavity. Flavour very good. It is slightly over medium size and roundish.

## Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, November 18, in the Drill Hall, Buckingham Gate, Westminster, 1 to 4 p.m. A lecture on "Spraying Fruit Trees and Packing Apples, as Practised in Canada," will be given by Mr. Cecil H. Hooper, F.R.H.S., at three o'clock. At a general meeting of the Royal Horticultural Society, held on Tuesday, November 4, forty new Fellows were elected, amongst them being Lady Julia Follett, Major Charles A. Leslie, Major George A. Marshall, and the Hon. Mrs. Harbord, making a total of 1,045 elected since the beginning of the present year. The Society's annual examination in the principles and practice of horticulture will be held on Wednesday, April 22, 1903. Full particulars may be obtained by sending a stamped and directed envelope to the Society's offices, 117, Victoria Street, London, S.W. The questions set at all the previous examinations are now published, price 1s. complete.

## Echoes from Hamilton, N.B.

The weather is keeping open and mild for the opening month of winter. The result is (partly due to this fact, together with the general lateness of the first season) that foliage of all kinds part with less readiness from trees, shrubs, or herbs, than usually is the case. This tends to keep things naturally longer messy and untidy, but a night of rain, succeeded with a degree or two of frost, would decide the matter, and very possibly this will not be long in presenting itself now. The members of the Hamilton Horticultural Association and a few friends met Mr. Moir, head gardener at Earnock, on the occasion of his leaving the district, in the Commercial Hotel, on the evening of the 6th, to present him with a tangible token of their high respect for his uniform courtesy to all classes of the community whose duties brought them in contact with him. The presentation took the form of a gold chain and watch and a purse of sovereigns.—D. C.



**A New and Destructive Apple Rot.**

An unusual and serious trouble with harvested Apples has appeared in Western New York. It is confined entirely to scabby Apples. A white or pinkish mildew appears upon the scab spots and transforms them into brown, sunken, bitter, rotten spots. On very scabby Apples these rotten spots soon coalesce and ruin the fruit. The damage done is enormous. In Niagara, Orleans, Monroe, and Wayne counties, thousands of barrels of Apples have been ruined. The varieties most affected are Greening and Fall Pippins.

**A Phenomenal Season.**

Despite the lateness of the season fruit and flowers grown in the open are still being gathered in various parts of the country. Raspberries have been plucked near Leeds, and at Lydney, Gloucestershire: Plums have ripened at Epsom; fresh Primroses have been gathered at Wandsworth, and blossom from a Laburnum tree now in flower at St. Margaret's, Devon, in which county wild Strawberries are still being picked. Apple blossom, too, has been obtained from Weybridge, Surrey. At the same time, it may be noted that corn is being cut at Sandwick, in the Shetlands, as green now as in its early growth. Green Peas were being picked at Newport (Essex) on Saturday last, and ripe Strawberries are still to be gathered in the open.

**Reading University College.**

The fees usually charged in horticultural colleges are beyond the means of the ordinary gardener, who is none the less conscious that his chances of passing the Royal Horticultural Society's examination would be greater if he could supplement his practical training by spending a short period in the laboratories of a horticultural college. At Reading, a limited number of men of this class are granted a course of free instruction for six months, and a maintenance allowance, together with railway fare to and from Reading. They are required to devote their time between work in the laboratories in preparation for the R.H.S. examination, and in the College Gardens at practical work under the direction of Mr. Patterson. Particulars may be obtained of the Registrar, Reading University College.

**Scottish Horticultural Association.**

A meeting of the Scottish Horticultural Association was held on November 4 at 5, St. Andrew Square, Edinburgh, Mr. Charles Comfort, president, in the chair. There was a large attendance. A paper was read by Mr. John Anderson, Greenside Place, Edinburgh, on "Horticultural Exhibitions and their Commercial, Educational, and Social Aspects." Forty new members were elected. Among the exhibits shown were a collection of flowers from the open border, consisting of thirty-six distinct species and one hundred varieties, by the president; twenty-five varieties of Cactus and pompon Dahlias, by Messrs. R. B. Laird and Sons; a collection of Plums, Apricots, and Cherries, from the open wall, by Mr. Webster, Gordon Castle, Fochabers; and two very fine varieties of Pentstemons, by Mr. Smith, Oxenford Castle.

**Coggeshall Royal Root Show.**

The annual root, cereal, and vegetable show in connection with the firm of Messrs. John K. King and Sons, seedsmen, of Coggeshall and Reading, which was so successfully revived some three years ago by the present enterprising members of the firm, Mr. Herbert T. King and Mr. Leonard G. King, was held at Coggeshall on Tuesday, October 28. Essex is a seed-growing centre, and by far the larger proportion of seeds used in the country and exported all over the world, are grown in Essex. The centre of the industry in this county is Coggeshall, and it was here as long ago as 1793, that Mr. John K. King established the seed-growing firm now so widely known as Messrs. John K. King and Sons. The huge warehouses cover nearly a quarter of a mile of ground. The founder of the firm originated the principle of growing seeds from pedigree selected specimens. Exhaustive experiments have shown beyond doubt that crops grown from pedigree seeds are from 25 to 40 per cent. heavier, while their value for feeding purposes is proportionately higher. To illustrate the value of pedigree-grown roots and their superiority over all others, as well as to meet their customers from all parts of the kingdom, Messrs. John K. King and Sons have instituted their Royal Root Show. It may be added that the firm have enjoyed the royal patronage for many years, and are now seedsmen to H.M. the King.

**The Fruiterers' Company.**

The prize of twenty-five guineas and the gold medal which were offered by the Fruiterers' Company for the best essay on "Gathering, preparing, packing, and profitably disposing of home-grown fruit and vegetables by cottagers and others with small holdings," has been awarded by the judges appointed by the company to Mr. R. Lewis Castle, the manager of the Woburn Experimental Fruit Farm, Ridgmont, Beds. Mr. Castle's essay will be published by the company at a nominal price, and it is hoped and believed that it will form a valuable and useful manual on the subject with which it deals.

**October Weather at Belvoir Castle.**

The prevailing direction of the wind was N.E., total six days. The total rainfall was 2.31in; this fell on twenty-two days, and is 0.77in below the average for the month; the greatest daily fall was 0.46in on the 13th. Barometer (corrected and reduced), highest reading, 30.485in on the 24th at 9 a.m.; lowest reading 29.304in on the 15th at 9 p.m. Thermometers: highest in the shade, 60deg on the 13th; lowest, 29deg on the 19th; mean of daily maxima, 53.90deg; mean of daily minima, 42.45deg; mean temperature of the month, 48.17deg; lowest on the grass, 25deg on the 19th; highest in the sun, 104deg on the 12th; mean temperature of the earth at 3ft, 51.67deg. Total sunshine, 52 hours 5 min, which is 42 hours 43 min below the average for the month; there were ten sunless days.—W. H. DIVERS.

**Feather in Tomatoes.**

Our contemporary, "The Gardener," in its issue of November 8, describes and illustrates a so-called new and serious disease, to be known as "feather," affecting Tomato foliage. The plant figured is one of several grown in the Lea Valley in large, well heated and well ventilated structures to produce fruit for market. Many plants are normal in leaf and fruit, and not a few are abnormal in foliage, being in the condition known as "feather," and, though flowering somewhat boldly, not producing any fruit. In some of the structures only a few plants are affected with "feather," some plants having normal growth and fruit, and also abnormal formation and no fruit, the normal growth being the first, the abnormal the succession. In most instances, however, the young plant has normal lower leaves, and after being planted out and advanced for fruiting develops "feather," and the production of fruit is nil.

**The Late Mr. Charles Maries.**

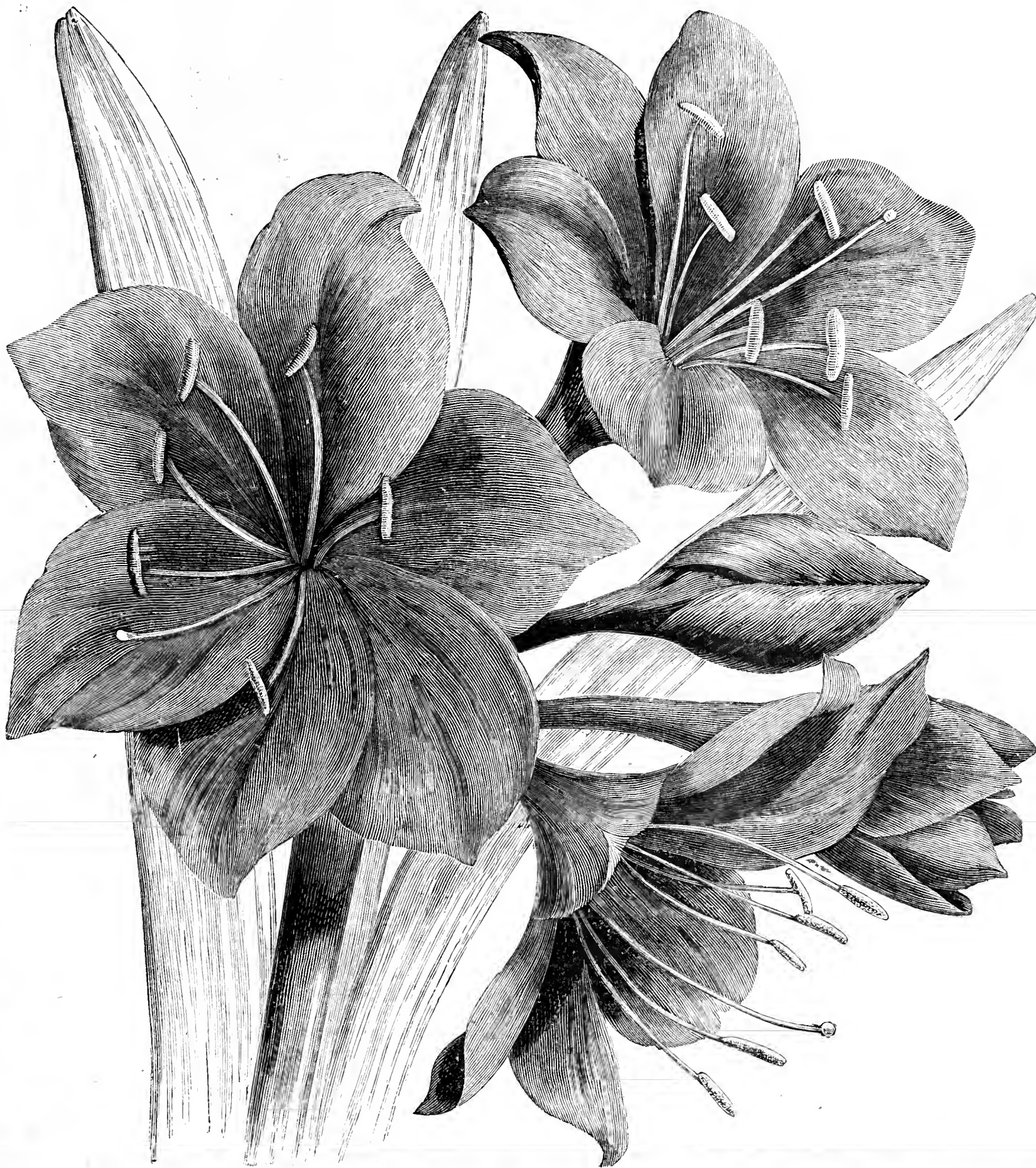
This noted plant collector and horticulturist passed away on October 11 at a comparatively early age. "The Garden" publishes the following notes of his career: "He was in the employment of Messrs. James Veitch and Sons, when, in 1876, he was entrusted with a mission to explore part of China, Formosa, and Japan, with a view to introducing into Europe some representatives of the splendid vegetation which was known, or was only supposed to exist, in these countries, and especially in the great Ichang Valley. Mr. C. Maries succeeded in sending home and in good condition such plants as *Platycodon grandiflorum* Mariesii, *Rodgersia podophylla*, *Abies Mariesii*, *Styrax Obassia*, *Pteris longifolia* Mariesii, *Hamamelis mollis*, *Hydrangea Hortensia* Mariesii, and the charming *H. Hortensia rosea*, which deserves a much more extended cultivation than it receives at present. He also reintroduced the long-lost and very pretty *Caryopteris Mastacanthus*, and a host of other plants of equal merit. His success in introducing these plants is all the more remarkable if we take into consideration the difficulties with which collectors had to contend in those days of comparatively slow navigation, and was mainly due to the care, and, I may add, also the ingenuity he displayed in the packing and forwarding of these plants to which he was so devoted. Later he was appointed superintendent of the Gardens of Durbhungah, and ultimately of the magnificent gardens of Gwalior, where he made some very extensive alterations and improvements during the many years that he had them under his direction. That Mr. C. Maries had well employed his time, and that his exertions were well and duly appreciated, is evident from the fact that, besides being an occasional contributor to the gardening papers and to the Journal of the Royal Horticultural Society, he was also a Fellow of the Linnean Society, and was one of the recipients of a Victoria Medal of Honour. To his widow, his son, and his daughter we offer our deepest sympathy."

## THE CACTUS DAHLIA IN GARDENS.

For several years in succession I have taken a day's cycle run into the country to the same destination, a run of some twenty-five miles, through a number of small hamlets and villages in Sussex, and, being "a Dahlia man," naturally the Dahlia catches my eye at once whenever and wherever it may be. I do not know

Dahlias were less in number, but the only old variety that was left in force was Constance, and the others were Cactus sorts, notably Starfish and Countess of Lonsdale, with sometimes a Night, and one or two others.

I was, indeed, struck to see that, although to look at the houses, &c., one would imagine that they had not altered for fifty years, yet the Cactus Dahlia had found its way even here, and I could not help smiling at what I had read in various gardening



VALLOTA PURPUREA. (See page 151.)

whether this particular route is favoured with an extra supply of the autumn favourite, but this I must say—that it appears to be the predominant feature in quite nine out of ten of the front gardens of cottages the whole way.

This fact was very striking some three or four years back. Then there was scarcely a flower resembling a modern Cactus Dahlia. I remember calling out the name of Constance, Cochineal, General Gordon, and one or two others repeatedly as we rode by, it being somewhat interesting to see the old stagers again and in good form, too. This year, however, they were gone; quite a change had come over the gardens. Not that the

papers, from one signing himself "A. D.," who still contends that Cactus Dahlias are a failure in the garden. Surely no man could expect to exact more bloom from a plant of any sort than I saw on hundreds of Dahlias as late as this present week (November 5).

I have often wondered where the enormous number of green plants turned out yearly by some of our retailing firms went to, but it is now, to a certain extent, no longer a mystery. If all the country over is changing "decoratives" for "Cactus" at the same rate as in this part of Sussex the demand must be indeed phenomenal.—DAHLIAIST.



## Societies.

### R.H.S., Scientific Committee, Nov. 4th.

Present: Dr. M. T. Masters, in the chair; Messrs. Worsley, Baker, Michael, Saunders, Bowles, Odell, and Hooper; Drs. Rendle and Cooke; Rev. G. Henslow, Hon. Sec.

*Ergot, Prevalence of.*—Mr. Hooper observed that this disease was particularly abundant this season, and exhibited specimens in Cocksfoot and Rye Grass. It generally is frequent in wet autumns.

*Apple Trees in Blossom.*—He also referred to the occurrence of flowers on Apple trees, a fact, elsewhere noted in the papers, due to the mildness of the weather. Dr. Masters observed that when such flowers occurred on spurs, they were dissociating next year's buds; but on terminal shoots they were additional growths.

*Tomatoes and Bordeaux Mixture.*—He also called attention to the advantage of using this fungicide, which were shown by outdoor Tomatoes having completely failed when left to themselves; but those sprayed bore at least half a crop this autumn.

*Crocus, rare var.*—Mr. Bowles showed a blossom of *C. speciosus* var. *Aitchisoni*, which bore a fine pale-coloured flower; the country was not known whence it was received.

*Cypripedium Malformed.*—Mr. Saunders showed a drawing of a flower having the labellum erect and one additional petal. Dr. Masters undertook to add further details.

*Apple Leaf Black Mould.*—Dr. M. C. Cooke reported as follows upon the Apple leaves submitted for examination: "They were badly diseased with the attack of a black mould new to the British Isles. The leaves were dead or dying at the ends of the branches, and the under surface sprinkled on the dead parts with black dots, which proved to be the tufts of conidia produced by *Coniothecium Oestieri* (Desm.), which was found and described in France in 1857 on leaves of *Cornus sanguinea*. The conidia are brown, very variable both in form and size, and muriformly septate, clustered in glomerules, and mixed with a few slender threads. This parasite has appeared so seldom that no experiments have been made upon it, but it is recommended to strip off and burn, and sweep from the ground all fallen leaves, so as to prevent the diffusion of the pest. Even when this is done, if there is any foliage left, it should be sprayed with one of the copper solutions to destroy the germinating powers of the conidia."

*Flax Wilt.*—Dr. Cooke communicated the following paper: "Since the last meeting of the Committee I have learnt that experiments have been undertaken in the N. Dakota experimental station (bulletin No. 50) to ascertain the cause of the disease known as 'Flax wilt' and 'Flax sick soil,' a disease which appears to be known in Ireland, as well as in Belgium, Germany, and other Flax-producing countries of Europe. I may premise that it has long been known that Flax cannot be grown continuously for any long period upon the same soil, because then the soil becomes 'sick' and the Flax seedlings die off and do not produce a crop. The cause of this has hitherto been a mystery, mostly attributed to the exhaustion of the soil. The result of these experiments appears to be, not the exhaustion of any of the chemical constituents of the soil, but the prevalence of a minute fungus in the soil, which preys upon the debris of the previous year's crop, and attacks the young seedlings of the new year, causing them to wilt and die. The name of this new fungus is *Fusarium lini*. Apart from the elucidation of this particular disease, I think that the subject must be of interest to this committee, since there is no reason for supposing that this is a solitary instance of the phenomenon, and that other cases of failure in successive crops, and of the wilting of seedlings, may possibly be due, in like manner, to the presence of fungus mycelium and conidia in the soil, so difficult to determine, and sometimes attributed to exhaustion of the soil. The methods adopted in this instance may serve as a guide to the course to be pursued in similar instances, and although they may entail considerable labour, appear to offer an adequate reward. At any rate, this communication justifies the action of the Department of Agriculture of the United States in establishing experiment stations, where these problems may be solved at the expense of the State. In the present case it is recommended that cultivators should cease growing Flax year after year upon the same land, and that at least three other crops should intervene between Flax crops; and that as much of the old Flax straw and stubble as possible which remains on the ground should be burnt forthwith, and that the Flax seed, before sowing, should be cleaned and treated with formaldehyde, according to instructions."

*Tumour of Potato Tubers.*—Dr. Cooke supplied the following additional facts upon this disease, lately reported upon: "It was attributed to a newly described fungus under the name of *Chrysophlyctis endobiotica*. Although at the time I advocated its decided affinity to the tumour of Beetroot. More recently specimens have been sent to Berlin, with the result that Dr. Magnus has not only confirmed this affinity, but has demonstrated that it is the same species, which is known as *Oedomyces leproides* (Trabut), so that the 'Beetroot tumour' and the

'Potato tumour' are caused by the same fungus. This should be noticed, since the form on Potatoes has for two years been destructive in several localities in the British Isles, and is quite capable of infesting Beetroot in like manner."

*Iris Black Mould.*—Dr. Cooke also reports upon diseased Irises sent to the Committee: "Since the last meeting a plant of *Iris ochroleuca* has been submitted to me for examination. The roots were in a perfectly sound condition, but the leaves were affected in a similar manner to those of other specimens sent to the Committee recently, and of which I find no record in the reports of our meetings. As this disease is apparently common, it is advisable that some allusion should be made to it for reference on a future occasion. The leaves turn yellow and sickly, and then brown, dying towards the tips. Upon these brown patches occur sooty or blackish spots, often of considerable extent, rather velvety under a lens, which manifest the appearance of a black mould (*Heterosporium*). The tissue beneath is permeated by mycelium, and the mouldy spots are often an inch or more in length, occasionally bounded by a darker line. The threads, or conidiophores, are erect, brown, septate, nodulose, often flexuous, and of an olive colour ( $70 - 90 \times 10 - 14 \mu$ ). At the apex, or laterally, the conidia are produced, either singly or two or more together, and are large, elliptical or oblong, with from one to three septa, or cross divisions, with the ends obtuse or rounded. The whole surface is granular, or warted, and of a pale olive colour ( $35 - 70 \times 14 - 20 \mu$ ). When mature these conidia are capable of germination from each individual cell, so that each conidium may be regarded as compound, and equivalent in reproductive power to as many conidia as there are cells in the original conidium. It occurs on the leaves of *Iris*, *Freesia*, *Antholyza*, and *Hemerocallis*, and is known, not only in Europe, but at the Cape, New Zealand, and the United States of America; and will be found described in Massee's 'Plant Diseases,' pages 321 and 440, and figured in this Journal on plate v., fig. 90. Spraying with potassium sulphide is reported to check the disease, and all diseased leaves should be cut off and burnt. If these precautions are attended to, and the foliage is not watered, the disease may be controlled. Also spraying with ammoniacal copper solution checks the disease, after clearing away diseased leaves."

*Grubs with Sedums.*—Mr. Saunders reported as follows on some specimens sent by Mr. Maynard, Wymondham, Norfolk: "The grubs sent with the enclosed letter are the grubs of one of the weevils, either the black Vine weevil (*Otiorhynchus sulcatus*) or the clay-coloured weevil (*O. picipes*), but the grubs of these species are so much alike that it is almost impossible to tell them apart. However, as the life history of both is exactly the same, it does not make much difference, from a cultivator's point of view. The parent weevils lay their eggs at the roots of various soft-rooted plants, Sedums, Primulas, Begonias, Cyclamens, and Ferns being great favourites. The weevils themselves are also very destructive to the foliage and tender shoots of Vines and many other plants, particularly Ferns and Dracenas. I do not know of any means of killing the grubs but picking them out from among the roots. Any insecticide that would kill the grubs would certainly be equally destructive to the plant. The beetles are not often seen, as they feed at night and hide themselves very carefully during the day. They may be caught by putting a white cloth under the plant that they are attacking before it becomes dark. If the plant is in a pot it is better, if possible, to lay it on its side; then, after it has been dark for an hour or so, throw a strong light suddenly upon the plant. This will generally cause the weevils to fall off, when they will easily be seen on the cloth; if they do not fall, give them a jarring shake, and search it well. Small bundles of dry moss or hay make good traps; they should be laid on the soil in pots near the stems of the plants, or, in the case of creepers, tied on to the stems or shoots, so that when the weevils are seeking shelter they should find one close at hand. These traps should be examined every morning. These weevils are either black, and about half an inch in length, or of a dull, pale, yellowish-brown colour, and about a quarter of an inch in length, according to the species." A vote of thanks was recorded to Dr. Cooke and Mr. Sanders for their valuable papers.

*Partial Separation of Parental Characters in a Hybrid Orchid.*—Mr. Hurst sent a flower with the following communication: "A plant of *Paphiopedilum* x *Canhami* (*P. superbiens* x *P. villosum*), which hitherto has always produced normal flowers with me, has now produced the curious flower exhibited. One side of the lip or slipper is normal in colour, being evidently a fair blend between the parent species. The other side of the lip may be divided into three distinct areas: (1) a narrow band of rich brown purple, as in the parent *P. superbiens*; (2) a broad band of greenish yellow, as in the parent *P. villosum*; (3) the remainder of the lip being a normal blend between the two parents. We have here evidently a partial separation of the mixed 'blood' of the parent species, the result being a mosaic rather than a blend. It is interesting to note that the hairs within the lip are sharply separated, as in the colour, and there is also a slight tendency to separation in the colour of the dorsal sepal and the petals. Whether this partial 'sport' will prove permanent remains to be seen, though it is not very likely. We

really know very little about the manner in which the cells of hybrids are determined and formed, but this particular case suggests that when the cells were being formed in areas (1) and (2), the parental determinants, instead of working together to form a blend, somehow separated, the *P. superbiens* determinants alone forming No. (1) area, and the *P. villosum* determinants forming the other (No. 2). Similar 'sports' have been recorded in the allied hybrid *P. x Harrisianum* (*P. barbatum* x *P. villosum*), for the history of which see: *Cypripedium x Dauthieri* Rossianum, Rehb. f. in 'Gard. Chron.', 1888, i., page 425. *C. x D. marmoratum*, 'Rev. Hort. Belge,' 1889, page 241, with plate. *C. x D. Dimidiata*, 'Gard. Chron.', 1895, i., page 335, fig. 45, cf.; also 'Orch. Rev.', 1894, pages 20, 147."

**Acorns from the Cape.**—Mr. Henslow showed specimens illustrating the great amount of variation occurring in the size and shapes of acorns from trees growing in and near Cape Town. They are all from original importations from Europe of the common Oak. One tree was remarkable for bearing a large number, all of which had three embryos. They were cultivated by the Dutch more on account of the acorns for pigs than for timber, as this is rather inferior to English Oakwood. Numerous avenues have been planted in the colony.

**Self-burial of Bulbs.**—Mr. Worsley showed a bulb formed below the previous one; and had come to the conclusion that its position indicated the, so to say, intention of Nature to deepen the position of the bulb. It bore numerous contractile roots of the usual spindle-shaped form, which were strongly wrinkled at the base. Mr. Henslow called attention to a paper on this subject ('Bot. Gaz.', xxxiii., page 401) on Californian Liliaceæ, of which some bury their bulbs (as does *Colchium*) by means of the rhizome alone, without contractile roots; while others do it entirely by aid of these organs.

**Wireworm.**—Mr. Balfour mentioned that these pests had been very troublesome this season, particularly where mineral fertilisers had been used. On a very poor chalky bank some Vetches were very badly attacked, especially on some long slips, which, for experimental purposes, had been dressed with potassic and phosphatic fertilisers. On these slips fresh shoots were continually being produced and destroyed. Another field near, situate in the valley, was planted with Prince of Wales Peas, and some rows of these also received dressings of the same fertilisers. A fine crop resulted notwithstanding wireworm attacks. Turnips were drilled between the rows, and these were badly attacked, especially where the mineral fertilisers had been used for the Peas. Although the Turnips were badly pierced, they were much finer otherwise than on the rows where these fertilisers had not been used. It is admitted that much organic matter favours wireworm, but the interesting point here is that very little humus in the soil growing Vetches, and the attack was much more severe where the mineral fertilisers were used. It may be noted that the Vetch is not often much injured by wireworm; suggested that possibly the more robust growth of the leguminous plants (Vetches and Peas) produced a more palatable and suitable food than the adjoining plants. In the case of the Peas and succeeding Turnips, a possible explanation may be that the increased vigour of the Peas, induced by the minerals, largely increased the supply of combined nitrogen, and this, in conjunction with the residual minerals, produced more succulent Turnips, which were, therefore, more favoured by the pests."

### Bournemouth Chrysanthemum, Nov. 5 and 6.

The sixteenth annual exhibition of the Bournemouth and District Chrysanthemum Society was held in the Volunteer Drill Hall, Holdenhurst Road, on the dates given. The open classes were represented by exceedingly good flowers, second in quality only to those at the late Royal Aquarium Show. Splendid blooms of W. R. Church were on view, together with M. Louis Remy, Florence Molyneux, Mrs. Coombes, and Miss Edith Pilkington, the latter being the premier Jap of the show, and exhibited by Mr. L. J. Newell, gardener to W. H. Dore, Esq., Branksome Park, Bournemouth, who was the chief prizewinner. There was a slight falling off in number of entries.

Mr. N. Molyneux, of Rooksbury Park, with Mr. H. Shoesmith, of Woking, judged the plants and cut flowers, and Mr. P. Isherwood, The Gardens, Criche, the fruit and vegetables. There were also classes for honey exhibits. The Mayor of Bournemouth opened the exhibition, and was supported by a number of the aldermen and councillors. The secretary to the society, pro tem., is Mr. C. W. Barrett, of Rosina, Drummond Road, Bournemouth, and has worked very successfully in his onerous position.

In the first division (open to all England), for thirty-six Japs, distinct, Mr. Newell, as we have already mentioned, led off with a good even set, the colour of the blooms very good, and size and finish both creditable. No other competed, however. For the twelve blooms, Sir John Groves' gardener (Mr. J. Collins) beat Mr. W. Squire, gardener to Col. C. M. Churchill, J.P., and the latter was alone for the twelve incurved, staging rather uneven blooms. Lady Isabel was the premier incurved, from the Rev. C. H. Burrows. In the local classes (second division), for a group of Chrysanthemums, Mr. Newell again was

first. The principal other prizetakers were Messrs. W. Squires, G. Barge, F. P. Telfer, T. J. Hankinson, G. James, Rev. C. H. Burrows, and Dr. H. G. Lys. The floral decorations formed quite a large feature of the show.

### Witney, Oxon, Nov. 4.

The annual exhibition of Chrysanthemums, fruits, and vegetables was held on November 4 at the Corn Exchange. The number of entries in the Chrysanthemum classes was not so large as last year, but in the classes for fruits and vegetables there were more entries. Two fine groups of Chrysanthemums were staged by Messrs. Felton and Batt. Mr. J. G. Ravenor staged twenty-four distinct Japanese blooms of exceptional merit. The magnificent fruits (Apples and Pears) staged by Mr. C. Walter, of Wantage, were specially admired. The collections of vegetables were keenly contested, and some excellent productions were staged. The leading prizewinners were Mr. J. White, Mrs. Pembrey, Mr. C. D. Batt, Mr. C. W. Early, and Mr. Gask. Primulas were exceptionally good, the leading prizes being taken by Messrs. Batt, Jacobs, Early, and Foreshow. The non-competitive collection of forty dishes of Apples from Mr. Wastie, Eynsham; and Marie Louise and Princess of Wales Violets from Mr. John Akers, Stanton Harcourt; and the group of plants from Eynsham Hall, staged by Mr. Anderson, were greatly admired. The success of the show is due to the energetic secretaries, Messrs. Felton and Hayter, and a hard-working committee.

### Cambridgeshire Horticultural, Nov. 5 and 6.

The Chrysanthemum, fruit, and vegetable exhibition of this society was held in the Corn Exchange, Cambridge, on November 5 and 6. The show was an excellent one, and the prizes were keenly competed for.

**CHRYSANTHEMUMS.**—The first prize for a group of plants in pots arranged in a circle 12ft in diameter was carried off by A. Matthews, Esq., 10, Trinity Street. The only other entry came from Miss Newman, Station Road, who was awarded the second prize. In the classes for pot plants, Mr. G. Willers, of Trumpington Road, and Ald. W. Bond, J.P. (gardener, Mr. H. Edwards), were winners of the first and second prizes respectively, except in the class for one single Chrysanthemum, when Ald. W. Bond was first and Mr. Willers second, there being no other competitors for pot plants.

For cut flowers, which were well grown, and included some good popular sorts, and not a few novelties, Ald. W. Bond, J.P., was again very successful, gaining four first prizes and three second prizes, closely followed by A. J. Thornhill, Esq. (gardener, Mr. F. Lockie), who obtained three first and two third prizes. E. B. Foster, Esq., J.P., Trumpington (gardener, Mr. Forbes), was awarded two first prizes and one third. Messrs. A. Matthews, J. Linton, A. W. Marshall, J.P., L. D. Stables, and Briscoe were the winners of the minor prizes for cut blooms.

**Special Prizes (Open to All England).**—For thirty-six Japanese blooms, distinct, Ald. W. Bond (gardener, Mr. H. Edwards) was awarded first prize, and E. B. Foster, Esq., J.P., Trumpington, won the second prize. In the class for six vases of Japanese, in distinct varieties, three blooms of one variety in each case, Ald. W. Bond, J.P., was again first, and A. W. Marshall, Esq., second, Mr. J. Matthews being third.

The premier bloom in the show (Japanese) was won by E. B. Foster, Esq., the variety being Mr. H. Weeks. The premier incurved bloom was won by A. J. Thornhill, Esq. (gardener, Mr. F. Lockie). The pompon and Anemone-flowered varieties were not much in evidence.

**FRUIT.**—Apples, Pears, Grapes, and Tomatoes were well represented, the Apples especially so. The size and colouring were said to be superior to those shown recently at the Crystal Palace, but, of course, some weeks have elapsed since the latter show was held. The special prize for Apples and Pears (open to all England), thirty dishes all distinct, went to Viscount Clifden, Lanhedock, Bodmin (gardener, Mr. W. J. Snell), and the second easily to Mr. J. H. Ridgewell, The Gardens, Histon, Cambs.

**VEGETABLES** were represented by well-grown examples of the leading sorts. Brussels Sprouts, a good variety, raised by Mr. J. H. Ridgewell, Histon, Cambs, and named Cambridge Champion, is a good sort, with firm buttons. Ailsa Craig Onion was the best variety shown, and Turnip Snowball was the best of this culinary product. Potatoes were in great variety and good form, Webb's Empire and Gordon Matthews especially so. A small dish of green Peas, not for competition, created surprise.

P. L. Hudson, Esq., Pampisford, Cambs (gardener, Mr. J. Kirkpatrick), received an Award of Merit for a non-competitive group of Orchids and foliage plants, which were tastefully arranged near the entrance.

Messrs. Isaac House and Son, Bristol, staged some beautiful single and double Violets. The judges were Messrs. G. Gordon, J. Meyers, and G. Wythes. The secretary, Mr. Arthur Matthews, and his assistant, Mr. Fordham, did all in their power to render the show a success.



## Cardiff, Nov. 5.

The annual autumn exhibition was held in the Park Hall—a most suitable site—and was, from a horticultural point of view, a great success. Throughout the show much high-class culture was prominent. In no section was this more plain than the classes devoted to cottagers and amateurs. In the former section incurved varieties of *Chrysanthemums* were simply marvellous productions. C. H. Curtis, for example, was here staged quite equal to any blooms of this variety staged at the late show of the N.C.S. in London. Trained plants were of a high order of merit, a similar remark applying to floral work, wreaths, bouquets, &c. Mr. Julian, Chairman of Committee, with Mr. Gillett, worked hard to make the show what it undoubtedly was—a success. Cut blooms were the most important feature of the show.

**OPEN CLASSES.**—The leading prize was £6, offered for twenty-four Japanese distinct, for which four competed. Mr. Drake, Cathays Terrace, Cardiff, somewhat easily secured the leading award with a stand of remarkably even, fresh, full-sized blooms of the following varieties:—Back row: Mrs. J. Lewis, T. Carrington, Anstrale, Madame Herrewé, Rev. W. Wilks, Madame G. Bruant, Le Grand Dragon and Madame Carnot. Middle row: Mrs. A. Barratt, M. Hoste (very fine), M. Chenon de Leché, W. R. Church (rich), Madame L. Remy, Millicent Richardson, Mrs. Coombes and Mrs. Mease. Front row: Miss Nellie Pockett, Matthew Smith, Mrs. Barkley, M. Louis Remy, Vivian Morel, Mrs. G. Mileham, C. J. Salter and General Buller. Mr. J. Howe, gardener to G. Williams, Esq., Manor House, Cardiff, was a good second with blooms a trifle smaller. W. R. Church, H. Stowe and Bessie Godfrey were noteworthy in this stand. Mr. C. Ritchings, gardener to the Misses Baird, St. James, West Malvern, was third.

For twenty-four incurved three competed, the best—an even level set, neatly set up—coming from Mr. Drake. Lady Isabel, C. H. Curtis, Dorothy Foster, Ialene, Hanwell Glory, Nellie Southam, Louisa Giles, Yvonne Desblanc, Nellie Threlfall, Miss Annie Hills and Mrs. H. J. Jones were the most conspicuous. Mr. Ritchings followed closely. Globe d'Or, Lady Isabel and Rose Owen were very fine in this collection. Mr. H. Townend, gardener to H. Pitt, Esq., Abergavenny, third.

Four competed in the class for twelve Japanese, Mr. Townend easily securing the premier award with full-sized even blooms, of which the following were the most conspicuous: Lily Mountford, Nelly Towers, Mrs. J. Bryant and Lord Ludlow. Mr. R. Milner, gardener to Miss Talbot, Margam, second. Mr. J. Howe third.

**LOCAL CLASSES.**—For twenty-four Japanese in not less than twelve varieties there was a stiff competition, and excellent blooms staged. Mr. E. A. Parsons, gardener to Mrs. J. D. Gunn, Newport Road, Cardiff, secured the leading award with a collection containing remarkably handsome blossoms of Mrs. J. Lewis, W. R. Church, Madame Carnot, Lord Ludlow, M. Louis Remy, and M. Chenon de Leché. Mr. J. J. Graham, gardener to A. T. Stephens, Esq., Penarth, was a close second; Mrs. G. Lewis in this stand was adjudged the premier bloom of the show. Mr. H. A. Allen, Penarth, third.

Mr. Graham succeeded in winning the first place for twelve Japanese, very closely followed by Mr. A. F. Hill, 10, Oakfield Street, Cardiff, who staged remarkably fine examples of popular varieties. W. R. Church in this stand winning the Wells Silver Medal. Mr. T. Malpas, gardener to Dr. Lynn Thomas, Cardiff, a close third. Mr. Parsons won the first prize for twelve incurved with neat examples of leading varieties. For six blooms any one white variety Mr. Graham staged Mrs. J. Lewis, securing the coveted award, Mr. Parsons following with the same variety. Six staged twelve Japanese: Mr. A. F. Hill first, Mr. H. A. Allen second, and Mr. A. H. Edwards third, all very close together in point of merit.

Cottagers' classes were remarkable for the excellence of the blooms produced. For six incurved, Mr. J. G. Jones, 41, Cecil Street, Cardiff, staged blooms of C. H. Curtis and Ma Perfection that would have been a credit to the Trophy Class blooms at the Aquarium in London. Mr. E. Jones, 122, Pearl Street, Cardiff, second.

No fewer than ten staged six Japanese distinct. Mr. W. H. Owens, 62, Salisbury Road, Cardiff, won first place with Mrs. J. C. Neville and E. Carpenter, remarkably good. Mr. E. U. Phillips, Canton, a close second. Single flowered varieties were capitally staged. For six bunches distinct, three sprays of each, Dr. T. Wallace was an easy first with attractive blooms. Mr. A. T. Stephens second.

In the cross and wreath department, Mr. W. Treseder was almost unapproachable, securing the leading awards for the best wreath, cross, ladies' spray and bridal bouquet, all of the highest merit. Mr. Ralph Crossling, Penarth, secured the leading award for bouquet of *Chrysanthemums* with a choice effort composed of *Source d'Or* entirely, with Ferns, &c.

Plants were not numerous, but remarkable in point of quality. For two dwarf trained specimens, incurved, Mr. T. Binden, gardener to Dr. T. Wallace, was the only competitor.

The two plants were C. H. Curtis, about 3ft in diameter, one carrying thirty-four specimen blooms, the other twenty-three, even larger than those on the former plant. The foliage, too, was remarkably healthy and abundant. With a marvellous plant of Miss Rose, fully 4ft in diameter, and literally smothered with flowers, Mr. Binden secured the leading award for specimen single flowered variety. In the open class for a group of *Chrysanthemums*, Mr. Treseder was the only competitor, staging plants carrying good blooms and not too crowded.

Local classes were better filled. Mr. W. Hatherdale, Roath, won for a group to fill a space of 50 square feet. The plants were capitally grown and arranged. Mr. James Howell, Cardiff, second. Mr. W. H. Owen winning in a smaller class with a meritorious exhibit. Non-competitive exhibits were numerous and interesting. Mr. J. Basham had a remarkably fine display of hardy fruit, Mr. W. Treseder Cactus Dahlias, Mr. Stephen Treseder Roses, and Mr. J. Cypher, Cheltenham, Orchids.

## Corn Exchange Chrysanthemum Show.

This took place on the 10th inst., and, as usual, was held in an upper room of the Restaurant adjoining the Corn Exchange in Mark Lane, London. This exhibition arose out of a feeling of rivalry among members of the Corn Exchange who cultivate *Chrysanthemums*. The schedule contains but nine classes. The first four are open only to members of the corn trade only; there are four others open to non-members who are amateurs; and there is a ninth class for a vase of six cut blooms. The blooms are arranged ready for judging by 11 a.m., and as soon as the awards are made exhibitors and others are admitted; and at half-past three the blooms and such other exhibits as may be sent are sold by auction for the benefit of the Corn Exchange Benevolent Society, and a goodly sum is thereby obtained for this deserving charity.

In the classes open to members of the Corn Exchange the principal ones were Mr. Wm. R. Clarke, the treasurer, and Mr. F. W. Smith, the former being the most successful, as he obtained the first prize for twelve distinct Japanese varieties, his gardener, Mr. F. King, staging well-developed blooms of Madame Gustave Henry, M. L. Remy, M. Chenon de Leché, Australie, G. J. Warren, Sunshine, W. R. Church, Swanley Giant, Mrs. G. W. Palmer, &c. Mr. F. W. Smith, Weybridge (Mr. T. Buckmaster, gardener), was a close second. He had good blooms of Henry Stowe, Madame Carnot, G. J. Warren, Le Grand Dragon, Nellie Pockett, Sir H. Kitchener, W. R. Church, Mrs. G. Mileham, &c. With twelve blooms, distinct varieties, thereby meaning any type, Mr. W. R. Clark was again first, having four good incurved blooms, viz., Madame Ferlat, Lady Isabel, *Chrysanthemiste Bruant*, and Madame E. Roger; and such fine Japanese as Mrs. Mease, Pride of Exmouth, Mrs. W. Cursham, M. L. Remy, &c. Mr. F. W. Smith was again second, having all Japanese. With six blooms of Japanese Mr. Clark gained a third success, staging capital examples of Lord Ludlow, Mrs. Barkley, Mrs. W. Popham, Mrs. G. W. Palmer, Australie, and Le Grand Dragon. Mr. F. W. Smith was again second, also with good blooms. With six blooms of any varieties Mr. Clarke gained his fourth first prize, staging once more good blooms, and Mr. F. W. Smith was second.

In the division open to non-members of the corn trade there were seven competitors in the class for twelve Japanese, the first prize being taken by Mr. R. Kenyon, Monkham, Woodford, who staged finely developed examples of Australie, Lord Ludlow, Lily Mountford, M. L. Remy, Mafeking Hero, Sensation, Mrs. G. Mileham, J. R. Upton, W. R. Church, Mermaid, M. Chenon de Leché, M. Hoste, &c. Mr. F. S. Holland (Mr. T. Stevenson, gardener) was second with good blooms of Madame G. Henry, Lily Mountford, Mrs. Harry Emmerton, Mrs. T. W. Pockett, Mrs. H. Weeks, Mrs. Greenfield, Mrs. G. Mileham, &c. With twelve blooms, distinct varieties, Mr. Holland was again first, staging four very fine incurved varieties—*Chrysanthemiste Bruant*, Mrs. H. J. Jones, Ialene, and Hanwell Glory; and such Japs as W. R. Church, Australie, Mrs. G. Mileham, M. L. Remy, Soleil d'Octobre, &c. With six blooms of Japanese Mr. Holland was again to the fore. He had, in good form, M. L. Remy, Australie, Miss C. Pilkington, Mr. T. Carrington, Matthew Smith, and Madame L. Remy. Mr. R. Kenyon was second, his leading blooms were M. Chenon de Leché, Sensation, Henry Weeks, and Mrs. Barkley. With six blooms of any varieties the first prize was taken by Mr. Holland, with the following incurved:—Mrs. H. J. Jones, Dome d'Or, Globe d'Or, Lady Isabel, M. Desblanc, and Miss A. Hills, all in good character. Mr. H. Ferguson came second with five Japs, chief among them W. R. Church, M. L. Remy, and C. J. Salter. The best vase of six blooms open to all came from Mr. F. S. Holland, and Mr. F. W. Smith was second.

Among miscellaneous exhibits were ten pots of charming *Cattleyas* from Mr. D. H. Grimsdale; a lovely bouquet of Orchids, Lilies, Roses, &c., H.T. Liberty being conspicuous among the latter; and a decorated car, a very good piece of work indeed, from Messrs. M. Longman and Co., Mark Lane.

A silver bowl, offered for the best twelve blooms in the classes

open only to the members of the Corn Exchange, was awarded to Mr. W. R. Clarke, for his twelve first prize Japs in class 1, and a silver cup for the best twelve blooms in the classes open to non-members was awarded to Mr. F. S. Holland, for his fine stand of eight Japs and four incurved in class 6.

### Southampton, Nov. 4.

Quite one of the best of the many autumn exhibitions held in the Victoria Hall was that which took place on the date named. The competition generally was of a keen order of merit; the exhibits close in point of quality.

**OPEN CLASSES: PLANTS.**—For the best collection of Chrysanthemums arranged in a limited space, Mr. C. Hosey, gardener to J. C. E. D'Esterre, Esq., Elmfield, Southampton, was first prizetaker with dwarf plants carrying good blooms. Mrs. Barkley, Mrs. Weeks, and N.C.S. Jubilee were especially noticeable. Mr. B. Henley, Masonic Hall, Woolston, was second. Mr. T. Hall, gardener to Sir S. Montagu, South Stoneham House, third. Plants suitable for conservatory decoration were well shown. For four Mr. C. Hosey won with good examples of Charles Davis, R. Hooper Pearson, T. Carrington, and Miss Alice Byron. Mr. C. Dymott, florist, 50, Millbrook Road, Southampton, was second. Bush plants, naturally grown, were numerous and good, Mr. Dymott winning from Mr. C. Hosey, who followed closely.

**CUT BLOOMS.**—The principal class was that for twelve varieties Japanese, three blooms of each, staged in vases, for which the Victorian Challenge Trophy was offered, along with a substantial money prize. Three competed, the best coming from Mr. G. Hall, gardener to Louisa Lady Ashburton, Melchet Court, Romsey, with really good examples of Thomas Giles, William Keylock, Mrs. G. Mileham, Le Grand Dragon, Marquis de Venosta, Mrs. L. Remy, Australie, Madame Herrewége, T. Carrington, Mrs. J. Lewis, Mrs. J. Bryant, and Mrs. Weeks. Mr. L. Dawes, gardener to Mrs. Ogilvie, Hambledon, was an uncomfortably close second, his best blooms being Mrs. Barkley, Sir H. Kitchener, Jane Molyneux, Pride of Madford, Miss Alice Byron, and Phœbus. Mr. C. Hosey was third.

For twenty-four Japanese four competed, the best coming from His Majesty the King, Osborne (gardener, Mr. T. Nobbs), with Mrs. E. Barker, Mrs. J. Bryant, M. Louis Remy, Vivian Morel, Jane Molyneux, Mrs. W. H. Lees, Madame Desblanc, Anstrale, Charles Davis, Mrs. Barkley, Guy Hamilton, Mrs. Coombes, Mrs. C. H. Payne, J. R. Upton, M. Chenon de Leché, Le Grand Dragon, Mrs. W. Mease, H. Payne, and Lady Hanham, Mr. G. Hall being second. Mr. J. Wasley, gardener to J. B. Taylor, Esq., Sherfield Manor, Basingstoke, was third. Five competed in the next class, that for eighteen Japanese, making a full display. The prizes went in the same order as in the former class.

For twelve Japanese Mr. Dawes won easily with fully developed examples of Mdle. Marie Hoste, Mrs. Coombes, M. P. Rivoire, Alice Byron, Lord Salisbury, E. Molyneux, Pride of Madford, M. Gustave Henry, Sir H. Kitchener, Mrs. G. Mileham, Mutual Friend, and Phœbus. Mr. Nobbs second. In the class for twelve incurved Mr. P. Hall won easily with medium-sized examples of Topaze Orientale, Globe d'Or, Yvonne Desblanc, Ada Even, Miss D. Foster, C. Crooks, Lady Isabel, Nellie Threlfall, Baron Hirsch, C. H. Curtis, Mrs. R. C. Kingston, and Louisa Giles. Mr. J. Love, Park Road, Cowes, Isle of Wight, second. In this stand, was accorded the premier award for an incurved bloom. Mr. E. Brown, Alma Road, Southampton, won for twelve Japanese incurved, with typical examples of this section. Mr. G. Hall second.

In the classes devoted to gentlemen's gardeners and amateurs there was a bold display of really fine blooms. For eighteen of any kind, and not more than two of any one variety, four competed, the best coming from Mr. E. Brown. Noticeable in this stand were Mrs. Mileham, W. R. Church, Mrs. Weeks, Calvat's '99, M. Chenon de Leché, Vivian Morel, Alice Byron, and C. Davis. Mr. M. Hodgson, Morton House, Kingsworthy, second. Amongst seven competitors for twelve blooms Mr. Brown again won with varieties similar to what he staged in the previous class. Mr. Tragett, Awbridge Danes, Romsey, second. In the class for four varieties Japanese, three blooms of each, staged in vases, Mr. Brown again won first prize with really fine examples; second, Mr. H. E. Sugden, Ingersley, Chilworth. The premier Japanese bloom was Miss Alice Byron, belonging to Mr. J. Dawes.

Miscellaneous plants arranged for effect were not numerous. Mr. E. Wills, The Nurseries, Winchester Road, Southampton, was first; Mr. T. Hall, second.

**OPEN TO LADIES ONLY.**—For the most tastefully arranged vase of Chrysanthemums, foliage, grasses, &c., Miss Minnie Snellgrove, 10, Oxford Road, Southampton, was accorded premier place for a charming exhibit. Mrs. Jeffrey, Nursling, Southampton, second. Five competed with a basket of autumn leaves and berries grown cut of doors, and as all were tastefully arranged a good effect was produced. Miss Wadmore, Brook House, Basingstoke, was the most successful with a charming exhibit; Mrs. Jeffreys second.

Fruit was plentifully contributed. Space, however, forbids more than a mere mention of the classes. Five competed for three distinct varieties of Grapes. Mr. J. C. Eastwell, gardener to E. C. Walker Munro, Esq., Rhinefield, Brockenhurst, was first with Alnwick Seedling, Muscat of Alexandria, and Gros Guillaume. Mr. W. Mitchell, gardener to J. Willis Fleming, Esq., Chilworth, second. Mr. T. Hall, third. Apples were numerous and of excellent quality. For four varieties dessert Mr. T. Hall won the leading position with an excellent exhibit. Mr. H. Osman, The Vineries, West End, was second. No fewer than nine competed for four varieties kitchen Apples. Here Mr. T. Hall was again the most successful.

The arrangements were, as usual, of that high character which always is in vogue here, Mr. C. S. Fudge, Secretary, having everything in place at the right moment.

### Newport, Nov. 6.

In the Gymnasium, the fourteenth annual autumn show was held on the date named. The entries were not quite so numerous as in some years past owing to the unfavourable weather experienced. Still, they were plentiful to make a pleasing display. The arrangements were quite of the right order in the hands of a practical committee so ably led by Mr. F. Turner, hon. secretary.

Open classes were not numerous. For the best group of Chrysanthemums interspersed with foliage plants Mr. J. Pegler, gardener to H. J. Davis, Esq., was the most successful, winning with plants carrying substantial blooms and good foliage, all tastefully displayed. Dr. Thomas was a good second.

Bush grown and dwarf trained plants were sparsely shown. Cut blooms were numerous and good. The principal class was that for twenty-four Japanese in not less than twelve varieties, for which a challenge cup and a substantial money prize were offered. Three competed. Mr. J. Duff, gardener to Mrs. Williams, Newport, was an easy prizetaker with heavy fresh blooms; especially good was Australie, Madame Carnot, Simplicity, Matthew Smith, Mrs. J. L. McKellar, Phœbus, Calvat's '99, Mons. Louis Remy (extra fine), Mrs. J. Bryant, E. Perkins, Madame L. Remy, Madame G. Henry and Vivian Morel. Mr. J. J. Graham, gardener to A. T. Stephens, Esq., Newport, was second with typical examples of Mrs. Barkley, W. R. Church, Mrs. Mease, Calvat's Sun, Pride of Madford, and Mrs. J. Lewis. Mr. G. W. Drake, Cardiff, third. In the class for twelve Japanese distinct, Mr. J. Duff again won premier position with smaller examples than he staged in the former class. Mr. Greenfield, Nellie Pockett and Edith Perkins were noteworthy. Mr. G. Richardson, gardener to Sir H. M. Jackson, second.

In the local classes the competition was much keener. Mr. R. Long, gardener to W. J. Dawson, Esq., won for a group of Chrysanthemums. Colonel Wallis second, Mr. Phillips securing a first prize card for a group of miscellaneous plants with quite an effective exhibit of Orchids, Palms, Ferns and Crotons. Colonel Wallis second.

For twelve Japanese blooms five competed, making a capital display. Mr. A. T. Stephens first, Sir W. Jackson second, and the Rev. W. M. Willett third. Smaller Chrysanthemum classes and miscellaneous plant classes were well filled. Apples and Pears were plentifully staged. Space, however, forbids details.

### Birmingham Gardeners'.

Mr. F. W. E. Shrivell, of the Experimental Farm, Golden Gate, Hadlow, Tonbridge, was responsible for a very interesting and suggestive lecture recently before the members of this association, relating, as it did, to the influence of nitrogen on the Leguminosæ and Brassicæ. Lantern slides were used to illustrate the comparative results of crops and vegetables treated with stable or farmyard dung alone, on the addition of chemical fertilisers; also with the latter by themselves. The combination, however, of these components produced the greater results. For Potatoes animal-litter manure was considered essential, with or without the co-operation of artificials, serving, as it does, for the conservation of moisture in the soil and the necessary elaboration of the chemical agencies. As Mr. Shrivell observed, the experiments at Golden Gate are carried out with a view of ascertaining the economical value of heavy or light dressing of stable manure; also the possibility with regard to the economy of replacing the dung in some measure by chemical fertilisers. Further, they were meant to prove the quantity of nitrate of soda to be used with or without phosphates and potash, and the advantage, if any, of dispensing with dung altogether, and of substituting for it chemical fertilisers. The results show that, while a certain quantity of dung is essential, its use is often highly extravagant, and that it may, to a certain extent, be most profitably supplanted by various artificial manures. The lantern-slide illustrations were convincingly demonstrative of the judicious application of the chemical stimulants over that of stable dung alone. Various questions were satisfactorily answered by the lecturer, and in the discussion Messrs. W. B. Latham (the chairman), W. Gardiner, Walter Jones, C. R. Bick, C. H. Herbert, W. Spinks, and J. Wheeler took part.



## Gadding and Gathering.

"HERE AWA', THERE AWA'."

### Trees and Shrubs: The Planting Season.

One has active times at present "amunning" with the "Mummers," and gadding with the tree and shrub men. The gaddings are strictly to the point, and severely utilitarian, for multum in parvo is the distinguishing motto of the passing age.

Someone desires a short list of dwarf and compact growing evergreen shrubs, and I venture to name the following, which Mr. John Russell, of Richmond Nurseries, in Surrey, has nice stocks of at his numerous well-ordered grounds:—*Osmanthus Aquifolium* and its variety *ilicifolium*, a very attractive shrub that never grows ungainly, and generally slow but sure. It much resembles a fine-leaved bushy Holly, and has a chocolate-black colour of foliage. It furnishes an admirable covert plant, though it could not be planted on a large scale, yet in ornamental parts of the ground, where covert may also be desirable, it is worthy of consideration.

Another fine shrub is *Phillyrea decora*, perhaps one of the handsomest evergreens than any gardener could plant, and is highly recommended by Mr. Russell. It forms a compact, yet withal pleasingly developed shrub, with leathery, dark green, oblong, and smooth leaves, 5in to 6in in length. The plants can easily be kept in hand by a judicious use of the pruning knife every few years. *P. buxifolia* has very small leaves and twiggy growth; and there are also *P. angustifolia*, *latifolia*, *P. l. ilicifolia*, and the very handsome *P. Vilmoreana*, each of which has qualities.

*Olearia Haasti* is continually being planted, and no one could desire a hardier subject. I have seen it flourishing—which means that it was thoroughly established and happy—in bleak, wind-swept beds around Edinburgh, and in half-shaded corners of gardens, and flowers came year after year. The flowering propensity indeed almost constitutes a fault, for the plants in some cases expend their whole strength in floraison. In the autumn the downy heads of seeds turn brownish, and not everyone admires the appearance of them. The foliage is hard and small, but pretty on account of its bright greenness and silvery reverse. For town and smoky districts, equally for the remote parts of the country where shelter is not a feature, this shrub succeeds.

The numerous varieties of *Euonymus japonicus* must not be omitted from the present list. They are *E. j. medio-pictus aureus*, with narrow green leaves, and stems and centre of foliage bright golden; *latifolius albus variegatus*, leaves broadly margined with white, and a compact grower; *ovatus aureus*, the favourite golden coloured, broad leaved variety, and *argentea variegata*, with broad green foliage, margined with white, very largely planted. The type, *E. japonicus*, is very hardy, with leaves of a shining dark green. It is largely used for beds and for close undergrowth plantations, also for loose hedge screens in front of villa front gardens. Small plants are admirable for winter bedding and for window boxes. The white and green variegated creeping variety, so largely employed to carpet what might be bare spots beneath trees, is *Euonymus radicans variegata*.

Confining the choice still to dwarf evergreens, what is better for planting on neglected shady spaces beneath tall trees or in similar areas than the Butcher's Broom (*Ruscus aculeatus*)? The erect shoots are closely set with sharply pointed, even-edged, and smooth little "leaves," of a very intense dark green colour. When the plants are entirely happy, these little eladodes, or leaves, bear tiny Liliaceous, head-like flowers on one of their surfaces. The plant demands scarcely any attention, and will grow on dry banks without showing signs of distress. Two or three feet is the usual height.

*Skimmia japonica* must also be included, but it is not a favourite shrub with many, having a very dumpy habit of growth. It is very hardy, berries well, and is useful amongst dwarf evergreen flowering shrubs. The various varieties of *Buxus*, or Box tribe, are employed where topiary art is practised, and at Kew one has a splendid lesson on how to use the different sorts effectively in one bed. The bed is a large round one, and is filled with *Buxus* only. These are set in circles from the centre to the edge, taller growing varieties in the middle and the pigmies toward the outside. Each circle consists of one kind of *Box*, and the contrast of colour is very satisfactory. The shears are lightly applied to the shrubs, so that their form is kept within the desired and prescribed limits, though without severe formality. There are plenty of kinds of *Buxus* at the Richmond Nurseries to choose from, and these plants might be made more use of, in such arrangements as that referred to.

One would like to individualise a number of other specially effective and useful shrubs along this line, but space is a precious quantity, and the notes require curtailment. The *Cotoneasters* are rambling growers, more suitable for walls than for the grounds. Some of them, however, form pretty bushes—such as *C. microphylla* and *C. m. thymifolia*. *C. horizontalis* may also

be named. The others are larger and freer, except probably *C. congesta*, but of it I cannot write. The *Elæagnus* are very useful—and the word useful here means that they are adaptable in the hands of the planter for a variety of positions and uses, all for ornament, however, in the garden or kept grounds and shrubberies. The *Andromedas*, like the *Rhododendrons* and *Vacciniums*, prefer, though they do not absolutely demand, a peaty soil. A calcareous tilth they do object to. *Berberis Darwini* and even *B. stenophylla*, also the *Mahonia* (*B. Aquifolium*), the latter particularly, are suitable for inclusion here. The *Aucubas* must not be omitted, and for exposed knolls or dry hillsides and banks, what is better than the golden flowered Double Gorse. Its vivid green shoots are pretty in early spring, and the intense mass of richest yellow rivals the sun's splendour during April and May. To the foregoing notes I would like to append selections of other shrubs of taller growth, and having an evergreen character.

## Seedling Nectarines.

From the Editor of the *Journal of Horticulture* I have been favoured with two seedling Nectarines of Mr. W. Strugnell's raising at Rood Ashton Gardens, Trowbridge, Wilts, for opinion, and, as they have some distinct features, are figured in both fruits and leaves.

No. 1 seedling, fig. 1, A and B, was scarcely ripe when received—October 3, 1902. Mr. Strugnell, in a note, accounted for this through wasps being so destructive and only two fruits left, and it was kept until the 13th of that month, when it was sketched and eaten, the following being the description:—

Fruit, medium sized, almost round, slightly wider than in height, depressed at the apex, and with a wide shallow suture. Skin, pale green at the base and shaded side, entirely covered with dark purplish red next the sun. Flesh greenish, with a tinge of red next the stone, from which the flesh parts freely, melting, juicy, rich, and highly flavoured. Leaves serrated, without glands. Mr. Strugnell has obliged with the following replies to my queries through the Editor:—

1. Flowers, large. 2. Tree grown against an east wall. 3. Origin, Victoria Nectarine; flowers fertilised with pollen from

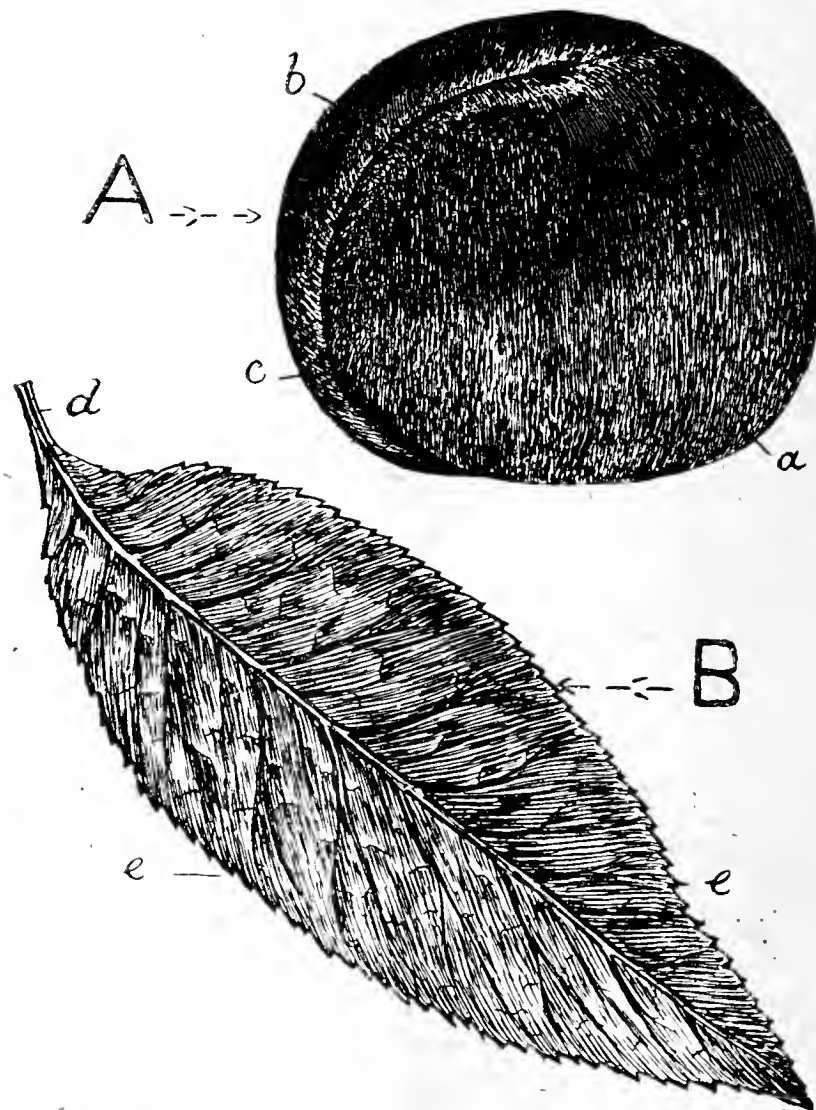


Fig. 1.—Mr. Strugnell's Seedling Nectarine, No. 1.

A, fruit, natural size; a, portion of fruit, pale green; b, part of fruit, dark purplish red; c, suture. B, leaf, two-thirds natural size; d, petiole glandless; e, edges sharply serrated.



### Fruit Forcing.

**CUCUMBERS.**—Plants that have been in bearing some time can be invigorated by a top-dressing of turfy loam, to which has been added about a fifth of thoroughly decayed manure or sweetened horse droppings and about a tenth of "nut" charcoal. A sprinkling of superphosphate, with an equal amount of soot added to it and mixed, sprinkled on the surface, will promote root formation and sturdy growth, with good colour; also resistant power against disease. Afford copious supplies of water, but let the soil be getting dry before any is given, then supply enough to moisten the bed through, using it at the same temperature as the houses. Thin the exhausted growths and lay in young, by which means the plants will continue bearing for some time longer. The autumn fruiterers are in full crop. These must not be overburdened; therefore remove fruit as soon as it attains a fair useable size, and all deformed fruit when observed. Examine the plants at least once a week for the removal of bad leaves, stopping or cutting away superfluous growths, keeping the foliage fairly thin, yet an even spread on the trellis.

Winter fruiterers should be allowed to become well extended over the trellis before pinching them for the production of fruit, training the growths evenly, and not more closely than to allow of the foliage being exposed to light. Stop after that at a few joints of growth or one or two joints beyond the show of fruit, but if the plants are weak allow more extension, and crop lightly at first. Remove most male flowers, and do not allow tendrils, but remove them as fast as they appear. Keep the beds replenished with soil, adding fresh and warmed as often as the roots appear at the sides of the ridges or hillocks.

Maintain a night temperature of 65deg, 5deg less in the morning of cold nights, 70deg to 75deg by day artificially, advancing to 80deg and 90deg, or more with sun heat. Admit a little air at the top of the house whenever the weather is favourable, affording it, however, without lowering the temperature. Judicious ventilation, however, is highly beneficial in carrying off superfluous moisture and giving solidity to the growths, enabling the plants to tide over the trying ordeal of prolonged severe weather, when plants with thin textured leaves often succumb. The syringe will only be necessary for damping paths and walls in the morning and afternoon in bright weather, which will give rise to the needful moisture, especially when the evaporation troughs are charged with weak liquid manure or water. On bright afternoons a light bedewing of the plants overhead will be beneficial, but care must be taken to practise it early enough to allow of the foliage becoming dry before nightfall, and not make the foliage tender by its too frequent recurrence. All water used for damping, watering, or liquid manure applied to the roots must be of the same temperature as the house or bed.

**STRAWBERRIES IN POTS.**—All plants for early forcing should be in frames with a view to protect them from heavy rains, and render them available for being draughted to the forcing house whenever required. Those for midseason and late forcing are as well plunged in ashes in a sheltered situation as anywhere else, indeed better than in piles against walls or houses with constantly open ventilators, which form the currents of air, which drive the life out of them and favour attacks of aphides and red spider. When plunged outdoors the plants are cool, moist, and airy, all primary conditions for Strawberry plants, and a light covering of bracken or straw in severe weather will save the tenderest varieties from injury.

Plants of La Grosse Sucrée, Royal Sovereign, and Viscountess Hericart de Thury should be held in readiness for starting early in next month. Where Strawberries are required very early the good old practice of affording bottom heat has no equal in securing good results. A light, airy, well-heated pit, with a pathway up the centre and beds or pits on each side that will allow of about 3ft depth of tree leaves being placed in and brought up so that the plants are about 1ft from the glass, is the most suitable. Strong, healthy plants with well-matured crowns may be given a top-dressing of a mixture of two parts phosphate of potash and one part nitrate of ammonia, about a thimbleful to each pot mixed with ten parts good loam; the surface soil should be removed with a pointed piece of wood, and the top-dressing applied to the pot in place of that removed. When the warmth of the leaf-bed has reached 65deg the pots may be plunged therein, but care must be taken that the heat about the pots does not exceed 70deg at the base of the pots. If the soil of the pots is in a moderately moist condition no water will be required, but if dry—a bad thing for Strawberries—water must be supplied to render the ball evenly moistened through. After this, little or no water

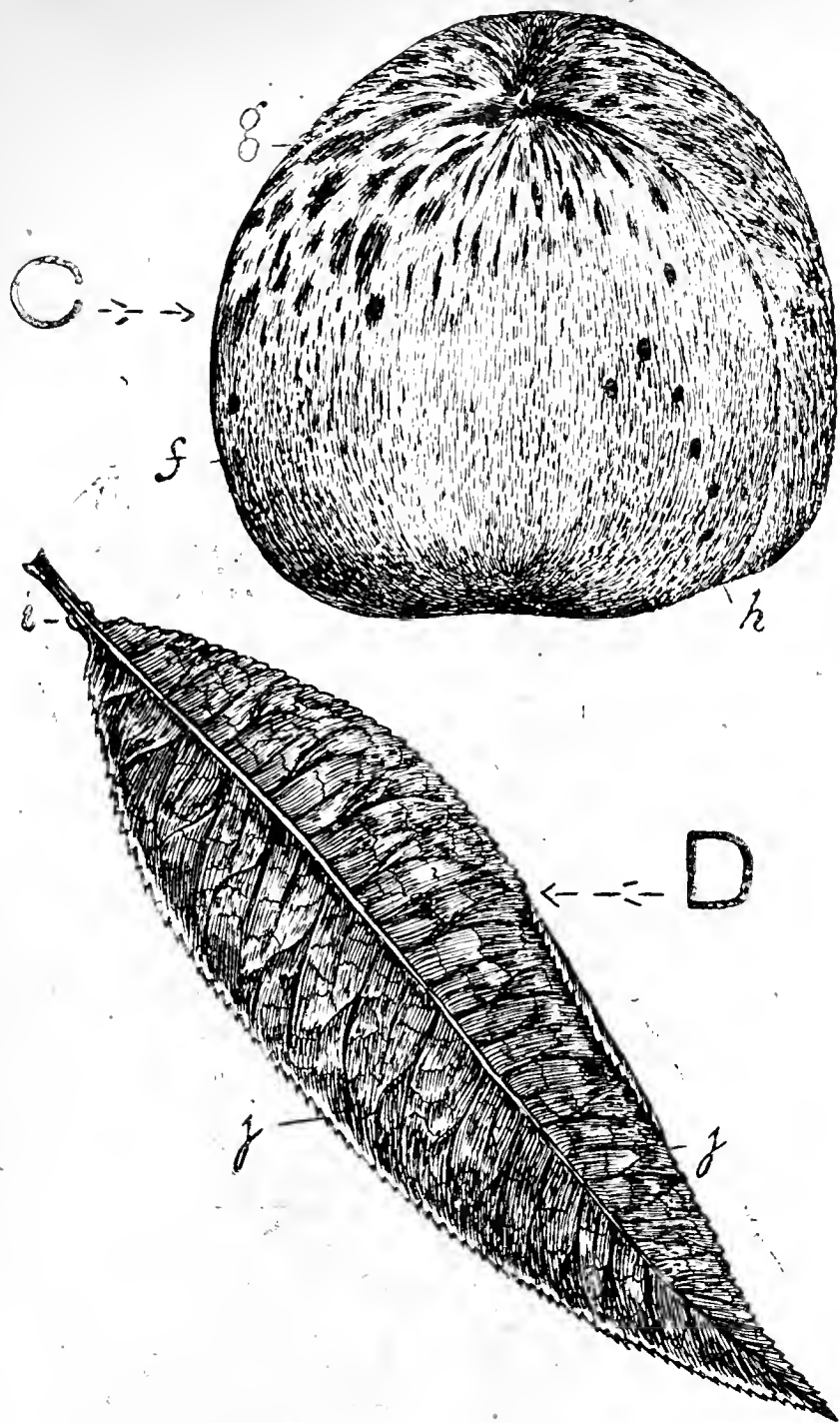


Fig. 2.—Mr. Strugnell's Seedling Nectarine, No. 2.

C, fruit, natural size; f, light shaded part of fruit, pale yellow; g, portion of fruit, bright crimson in stains and streaks; h, white suture. D, leaf, two-thirds natural size; i, petiole with round glands; j, edges sharply serrated.

Lord Palmerston and Sea Eagle Peaches. 4. Tree on its own roots. 5. Stone planted in 1899.

No. 1 seedling resembles Hardwicke's Nectarine, though the fruit is smaller, but this would no doubt be considerably enhanced by working on the Plum stock, seedling trees not usually producing large fruit. The seedling, however, ripens a month later than Hardwicke's, or at the same time as Victoria, from which it differs in the higher colour of the fruit and in the leaves being glandless. Mr. Strugnell says there is "no tree of Hardwicke on the place," and the tree appears hardier than Victoria, hence the seedling is likely to prove an acquisition to late Nectarines.

No. 2 seedling, fig. 2, C and D, was sketched and tested on October 14, 1902. Fruit rather large, about as high as wide, terminating in a point at the apex, where is a black, minute nipple, from which issues a faint suture, which appears like a white hair-line towards the stalk. Skin, pale yellow or lemon, stained, streaked, and mottled with bright crimson at the apex or next the sun, and even with crimson shading on the shaded side of the fruit. Flesh, pale yellow, very tender and juicy, stained with red next the stone, from which it separates freely. Flowers large, glands round.

This is a very richly flavoured Nectarine, and resembles Humboldt, but ripens about a month later. Mr. Strugnell describes it as a chance seedling, whose origin is unknown. The tree is on its own roots, and is grown against a south wall. He says the seedling No. 2 resembles Pineapple in shape and colour of flowers. The tree dates from 1898, and this its first time of fruiting. Downton, Pineapple, and Victoria are the varieties of Nectarine grown at Rood Ashton for late, but young trees of Humboldt, Spenser, and Newton are in hand for late gathering in the future.

I may say that Mr. Strugnell also forwarded fruits of Humboldt, Pineapple, and Victoria for comparison, and from these the seedlings have distinct features.—G. ABBEY.



will be required until the flower trusses appear, as the moisture of the fermenting leaves will be communicated to the pots and keep the soil sufficiently moist. Air should be given at 55deg, and all the ventilation possible above that, closing at 55deg and maintaining a temperature of 50deg. This will be sufficient until the trusses of bloom are thrown up; when the plants are near coming into flower they should be gradually withdrawn from the fermenting bed and given a position not more distant from the glass than 1ft to the foliage, the temperature still being 50deg at night and 55deg in the daytime, advancing to 65deg from sun heat. The plants will need little or no syringing until the fruit is set, but the plants must be kept free from aphides by fumigating the house as required, so as to have the plants quite free from the pests by the time they come into flower. When the fruit is set and swelling the temperature may be raised to 60deg at night and that of the day to 65deg or 70deg, advancing 10deg to 75deg or more from sun heat, with free ventilation, but not cold currents of air driving on the fruit, as this would dry up and ruin the crop. —ST. ALBANS.

Hardy Fruit Garden.

FORMS OF FRUIT TREES.—Various forms of fruit trees should be selected when planting largely, so as to adapt the best form to the position and space at command. Even gardens of limited extent may be furnished interestingly and profitably with several forms of trees which can be grown in a restricted style.

STANDARDS.—For profit and simplicity of culture there is no form of tree which possesses better general merits than standards. They are well suited for large plantations where plenty of space is available. Standards should not be grown less than 20ft apart in the case of Apples and Pears. Plums, as a rule, are wide enough apart at 15ft. The chief merit of standards is that they may be allowed to develop free growth, extending their branches well on all sides in an equal manner. Efforts to curtail extension must not be attempted by shortening, though the growth may be equalised and balanced by removing any overgrown branches, and a system of thinning out should be practised whenever there appears to be crowding. The trees have usually clear stems to the height of about 6ft, and a limited number of well-regulated branches at the time of planting. If these are not sufficient, shorten them back to increase the number the next season. Half-standards are useful, especially in the case of Apples and Plums. They have much shorter stems. Then there are the standard trained, or riders, which have long stems with flat fan-trained heads. These are used for lofty walls and sides of buildings, and frequently employed to cover the upper face of a wall, while the permanent trees are growing below.

PYRAMIDS.—The pyramidal form of fruit tree is a useful, profitable, and convenient shape for both large and small gardens. The branches are produced from quite low down the stem, the lower ones being allowed to extend a good length, while those higher taper to the top. They all ought to be originated thinly, and the side shoots they produce kept spurred in. The trees are liable to grow too freely when established, especially if on free stocks. This tendency may be subdued by lifting and replanting, shortening strong roots. The closer the trees are grown, the oftener root-pruning will be necessary. If Apples are grown on Paradise and Pears on Quince stocks growth is less vigorous; hence the trees may be planted 3ft to 6ft apart.

BUSHES.—The term bush as applied to Apples means a tree which is, or will be, of considerable size. The branches may originate low down on the stem like pyramids, but, unlike them, they may have the branches extending to one more uniform length, forming round-headed trees. Bush Apples are best grown 9ft to 12ft apart on Crab stocks, Pears on Pear stocks the same. Apples on a dwarfing stock such as the broad-leaved Paradise, and Pears on the Quince, may be grown 6ft apart. Bushes are usually grown with a limited number of main branches, which ought not to be too thickly placed. The side shoots are summer pruned, and shortened to form spurs in winter. This form of tree when in good condition is always prolific. Bush also applies to low-growing fruit trees, such as Currants and Gooseberries. The management of these consists in judiciously arranging the growths so as not to unduly crowd, and be equally balanced.

CORDONS.—Cordon trees are among the simplest forms, and are profitable and free bearing if well managed in the planting and after-treatment. For planting in a diagonal form against walls and fences the single stemmed cordons are the best. When trained upright the single stems are the most suitable also, planting in both cases 18in apart. Gooseberries and Currants may be grown on walls with this form of tree. Single stemmed plants should be 6in apart, or a plant may be trained so as to have three stems, each 6in distant from the other. In this case plant 18in apart.

FAN-TRAINED.—Formal and restrictive training other than on the cordon system is not, as a rule, profitable for walls. With fan-trained examples there is a greater amount of freedom in growth, and the trees can be better and more profitably managed than on the strict formal lines which confine the growth to a few main branches, such as horizontal-trained trees possess. The

usual forms for walls are the dwarf-trained with short stems not more than 18in high, and the half-standard trained with 1½ft to 3ft stems. The branches radiate like a fan, and can be regulated annually, readily cutting out the least desirable, and training at the best distances apart the most fruitful. The temptation to overcrowd must be avoided from the first. Peaches, Nectarines, Apricots, Pears, Plums, and Cherries are all adapted for this method, and may be planted 15ft apart. All these usually do well without root-pruning, but Pears on free stocks require some root restriction if the growth is so free that fruiting is prevented. —E. D. S.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.           | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|-----------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
| 1902.           |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                 |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
|                 |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ... 2    | N.E.               | deg. 46.7               | deg. 44.8 | deg. 53.9 | deg. 43.3 | Ins. 0.02   | deg. 49.0                             | deg. 51.0      | deg. 52.5      | deg. 35.0                    |
| Monday ... 3    | E.S.E.             | 47.2                    | 46.2      | 51.3      | 41.3      | —           | 48.5                                  | 50.8           | 52.3           | 32.2                         |
| Tuesday ... 4   | E.S.E.             | 46.2                    | 45.2      | 51.6      | 38.0      | 0.01        | 47.9                                  | 50.5           | 52.2           | 30.2                         |
| Wednesday ... 5 | E.S.E.             | 47.7                    | 46.5      | 55.8      | 44.3      | 0.11        | 47.5                                  | 50.2           | 52.2           | 35.0                         |
| Thursday ... 6  | E.S.E.             | 53.2                    | 51.8      | 58.2      | 47.2      | 0.17        | 48.9                                  | 50.2           | 52.1           | 35.7                         |
| Friday ... 7    | W.S.W.             | 52.2                    | 48.2      | 57.3      | 51.5      | 0.08        | 50.6                                  | 50.5           | 52.0           | 46.3                         |
| Saturday ... 8  | S.S.W.             | 52.7                    | 50.0      | 54.4      | 44.8      | 0.15        | 49.4                                  | 51.0           | 52.0           | 36.8                         |
| MEANS ...       |                    | 49.4                    | 47.5      | 54.6      | 44.3      | Total. 0.54 | 48.8                                  | 50.6           | 52.2           | 35.9                         |

A dull week, with rain nearly every day, and a dense fog on the night of the 3rd inst.

Publications Received.

"Garten Flora," November 1, containing a coloured plate single hybrid Roses. \* \* "Transactions of the Massachusetts Horticultural Society for the Year 1901," part II., per W. P. Rich, secretary. \* \* "Agricultural Industry and Education in Hungary: an account of the visit of the Essex Farmers' party to Hungary in May and June, 1902," compiled by T. S. Dymond. Chelmsford: County Technical Laboratories. 2s. 6d. net. \* \* "Louis Wain's Annual for 1902," Messrs. A. Treherne and Co., Limited, 3, Agar Street, London. W.C. 1s., paper covers; full of interesting and amusing illustrations of pussy, with bright and readable stories; a fine booklet for the children. \* \* "The Pacific Fruit World," Harvest Review series; 1, Prunes and the Prune Harvest, October 18, 1902; Apples and the Nut Crops, October 25, 1902, from Los Angeles, San Francisco.

Reclamation of Waste Land.

As for the depopulation of the rural districts, writes a veteran farmer to a contemporary, I think one of the greatest causes is the want of more proprietors, and the allowing of so much good land to remain uncultivated. There is as much uncultivated land in this country as would give employment to thousands of labourers. I know I shall be told that it will not pay to break up and cultivate unreclaimed land, but if you would take a trip out to Biggar and see what the Messrs. Murray, of Spittal, have done for Biggar Moss and for Heaveyside you would see that I am right. A former tenant of Heaveyside told me that very often in wet weather he had to drag some of his cattle with ropes out of moss holes, and cart them home. Now, if you will pay a visit to Heaveyside you will there see a large dairy of good heavy cows, and I never heard of them having to drag a single cow out of a bog, and they have supplied part of Biggar all that time. If the land of this country had been more equally divided, we would not have been so much eaten up and pestered with rabbits and ground game as we are, for a great number of our landed proprietors are more set upon feeding and breeding game than of cultivating their land, and giving employment to the rural population. If you should think of coming out to see Biggar Moss and Heaveyside, and if you are not satisfied then with what you see, if you would go the length of Stonehill, Lesmahagow, you would there see a place which seventy years ago was producing nothing but heather and bent. There was not a house nor a dyke upon the place. The proprietors did not require to expend a single farthing upon it, and the place has been let for the last fifty years at £4 per acre, so I think it has paid the cultivating very well.



## TO CORRESPONDENTS

\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**CINERARIAS WITH LEAVES ATTACKED (W. L. F.).**—The only means of destroying the grubs in the leaves is by pressing them between the thumb and fore-finger. You can see or feel where the grub is lying within the tissues.

**BOOKS WANTED (Idem).**—"Garden Manual," 1s. 9d.; "Royal Parks and Gardens of London," 2s. 6d.; "Vines and Vine Culture," 5s. 3d.; "Poultry for the Many," 7d.; or 9s. 11d. in all.

**LILY OF THE VALLEY (Ninga).**—It does no harm to water over the blooms when they are nearly or entirely expanded under forcing. Use the water tepid. If the overhead watering can be avoided, then by all means do so. If a hose is used, a jet or flange of water can be sent under the flowers to the roots. Mr. Jannock, of Dersingham, Norfolk, had it in his mind to write a pamphlet on Lily of the Valley culture, but whether he ever did so or not we are unable to say. No other booklet is devoted to a treatise on this plant alone.

**BOOK ON CHEMISTRY (C. C.).**—The book you have bought will be of some service to you; but there has just been published a second edition of the same work, of which you may have observed reviews in this journal. What we would advise is that you secure Cousins' "Chemistry of the Garden," 1s. net, from Macmillan and Co.; and probably also "The Chemistry of the Farm," 2s. 6d., by R. Warrington, and obtainable through booksellers from Vinton and Co., Limited. Read these closely, after which you will be a better judge as to what further books you require to continue the study.

**PIGEON MANURE FOR VINES (Anxious).**—We would secure and keep the pigeon manure perfectly dry by placing it in layers of 3in or 4in deep on shelves in a cool chamber or shed. If the dung is quite dry, and not likely to ferment, it could be placed in boxes or sacks. After the Vines have been cleaned and pruned, it could be used as a top-dressing for the borders by itself, in the same way that guano is employed, and at the rate of about 1lb per square yard of surface, this to be pointed in. You could assist the Vines during growth by alternately watering with Thomson's Vine manure, Clay's guano, and the pigeon manure each in a liquid state. Read closely the remarks under "Work for the Week."

**SHED BERRIES FROM ASPARAGUS (G. F. O. B.).**—The plants that have shed the berries mostly in the alleys will suffer from the progeny that must necessarily follow from the sowing of the seed, they also being prejudiced in the bearing in the coming season by being allowed to carry the berries this season, seed production being a great strain on the plants producing them, not nearly as good crowns and buds being formed as when the berries are stripped off whilst quite young. This is one of the great evils in Asparagus culture, the numerous and relatively small heads being a result of allowing seed production, combined with allowing a great number of shoots to remain on a plant. The seedlings, however, that will result from the seeding can easily be pulled up during moist weather, though it may be necessary in some cases to use a hand for it. The work will be more than that of removing the berries early, and the only advantage is that of leaving a seedling where there may be gaps in the bed or plantation.

**NAMES OF FRUITS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (T. A.).—Keswick Codlin. (W. C. and S.).—1, Nelson's Codlin; 2, Queen Caroline; 3, Newton Wonder; 4, Sops in Wine.

**NAMES OF PLANTS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (G. A.).—If you can supply typical specimens of your *Spiræas* we will endeavour to have them named. (F. N.).—1, *Adiantum Capillus-Veneris imbricatum*. (J. F.).—1, *Quercus pedunculata*; 2, *Q. cerris*; 3, *Bambusa japonica*; 4, *Gaultheria Shallon*; 5, *Rhus Cotinus*. (N. M.).—1, *Vanda Kimballiana*; 2, *Dendrobium formosum giganteum*; 3, *Phalenopsis amabilis*. (J.).—1, *Begonia Dregei*; 2, *B. sanguinea*.

## TRADE NOTES.

Messrs. Wm. Logan and Co., florists, bulb and seed merchants, High Road, Chiswick, W., have recently executed orders for parts of France, Ceylon and South Africa, these comprising seeds and bulbs.

### Culture of Vegetables.

Messrs. Toogood and Sons, of Southampton, have issued a booklet of over 140 pages (7in by 5in) on the "Culture of Vegetables," at the cost price of 3d. post free. Illustrations are included with the text.

### Harkness's Floral Guide.

This illustrated floral guide has just been published, and is excellently arranged. A coloured plate of four varieties of early flowering Chrysanthemums is included, and there are great numbers of woodcuts and other figures. Obtainable at the Grange Nurseries, Bedale, Yorks.

### An Extensive Catalogue.

The general nursery stock catalogue, issued by Messrs. Fisher, Son and Sibray, Limited, Royal Nurseries, Handsworth, near Sheffield, contains within its covers select and representative lists of the best in hardy trees, shrubs, Roses, fruits of all sorts, stove and greenhouse plants, &c., and is prepared in sections. The heights of trees and shrubs for use in ornamental or utilitarian plantations, and selection for different purposes, are here given, rendering it a most serviceable guide to those many gardeners who have not the opportunity to inspect the nursery stock for themselves.

## Trade Catalogues Received.

Amos Perry, Hardy Plant Farm, Winchmore Hill, London, N.  
—No. 33. *Hardy Border and Rock Plants*.

Harkness & Sons, The Grange Nurseries, Bedale, Yorks.—*Illustrated Floral Guide*.

## Covent Garden Market.—November 12th.

### Average Wholesale Prices.—Fruit.

|                           | s. d. | s. d.   |                                | s. d. | s. d.  |
|---------------------------|-------|---------|--------------------------------|-------|--------|
| Apples, Blenheims, bush,  | 7 0   | to 10 0 | Grapes, Muscat ...             | 2 0   | to 3 0 |
| " culinary, bush,         | 3 0   | 6 0     | Grapes, Alicantes ...          | 0 9   | 1 6    |
| " King Pippins, ½-sieve   | 5 0   | 6 0     | " Colman ...                   | 0 9   | 1 0    |
| " Cox O. Pippins, ½-sieve | 0 0   | 10 0    | Lemons, Naples, case           | 35 0  | 0 9    |
| Bananas ...               | 8 0   | 12 0    | Oranges, case ...              | 10 0  | 20 0   |
| Cobs and Filberts, lb.    | 0 4½  | 0 0     | Pears, dessert, ½-sieve        | 3 0   | 6 0    |
| Figs, green, doz. ...     | 2 0   | 4 0     | " stewing, ½-sieve             | 2 6   | 3 6    |
|                           |       |         | Pines, St. Michael's, each ... | 2 6   | 5 0    |
|                           |       |         | Plums, ½-sieve ...             | 0 0   | 0 0    |

### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                                | s. d. | s. d.   |                                  | s. d. | s. d.   |
|--------------------------------|-------|---------|----------------------------------|-------|---------|
| Aralias, doz. ...              | 5 0   | to 12 0 | Ficus elastica, doz. ...         | 9 0   | to 12 0 |
| Araucaria, doz. ...            | 12 0  | 30 0    | Foliage plants, var, each        | 1 0   | 5 0     |
| Aspidistra, doz. ...           | 18 0  | 36 0    | Grevilleas, 48's, doz. ...       | 5 0   | 0 0     |
| Chrysanthemums ...             | 6 0   | 12 0    | Lycopodiums, doz. ...            | 3 0   | 0 0     |
| Crotons, doz. ...              | 18 0  | 30 0    | Marguerite Daisy, doz. ...       | 4 0   | 6 0     |
| Cyperus alternifolius doz. ... | 4 0   | 5 0     | Myrtles, doz. ...                | 6 0   | 9 6     |
| Dracæna, var., doz. ...        | 12 0  | 30 0    | Palms, in var., doz. ...         | 15 0  | 30 0    |
| " viridis, doz. ...            | 9 0   | 18 0    | " specimens ...                  | 21 0  | 63 0    |
| Erica gracilis ...             | 8 0   | 9 0     | Pandanus Veitchi, 48's, doz. ... | 24 0  | 30 0    |
| " hyemalis ...                 | 10 0  | 12 0    | Primulas ...                     | 4 0   | 5 0     |
| " Caffra ...                   | 12 0  | 15 0    | Shrubs, in pots ...              | 4 0   | 6 0     |
| Ferns, var., doz. ...          | 4 0   | 18 0    | Solanums ...                     | 5 0   | 8 0     |
| " small, 100 ...               | 10 0  | 16 0    |                                  |       |         |

### Average Wholesale Prices.—Vegetables.

|                               | s. d. | s. d.  |                           | s. d. | s. d.  |
|-------------------------------|-------|--------|---------------------------|-------|--------|
| Artichokes, green, doz.       | 2 0   | to 3 0 | Horseradish, bunch ...    | 2 6   | to 0 0 |
| " Jerusalem, sieve            | 1 6   | 0 0    | Leeks, bunch ...          | 0 1½  | 0 2    |
| Batavia, doz. ...             | 2 0   | 0 0    | Lettuce, Cabbage, doz.    | 0 6   | 0 9    |
| Beet, red, doz. ...           | 0 6   | 0 0    | Mushrooms, forced, lb.    | 1 0   | 1 6    |
| Brussels Sprouts, ½-sieve ... | 2 0   | 2 6    | Mustard & Cress, pint.    | 0 2   | 0 0    |
| Cabbages, tally ...           | 3 0   | 0 0    | Onions, bushel ...        | 3 0   | 4 0    |
| Carrots, new, bun. ...        | 0 2   | 0 0    | Parsley, doz. bunchs. ... | 2 0   | 0 0    |
| Cauliflowers, doz. ...        | 1 6   | 0 0    | Potatoes, cwt. ...        | 3 0   | 6 0    |
| Corn Salad, strike ...        | 1 0   | 1 3    | Radishes, doz. ...        | 1 0   | 0 0    |
| Cucumbers doz. ...            | 3 0   | 4 0    | Spinach, bush. ...        | 2 0   | 2 6    |
| Endive, doz. ...              | 1 6   | 0 0    | Tomatoes, English, lb.    | 0 5   | 0 0    |
| Herbs, bunch ...              | 0 2   | 0 0    | " Jersey ...              | 0 3   | 0 4    |
|                               |       |        | Turnips, bnch. ...        | 0 2   | 0 3    |



## Average Wholesale Prices.—Cut Flowers

|                           | s. d. | s. d.  |                          | s. d. | s. d.   |
|---------------------------|-------|--------|--------------------------|-------|---------|
| Arums, doz. ...           | 5 0   | to 0 0 | Lily of Valley, 12 bnehs | 12 0  | to 18 0 |
| Asparagus, Fern, bnch.    | 1 0   | 2 0    | Maidenhair Fern, doz.    |       |         |
| Bouvardia, coloured,      |       |        | bnehs. ...               | 5 0   | 6 0     |
| doz. bunches ...          | 6 0   | 8 0    | Marguerites, white,      |       |         |
| Carnations, 12 blooms     | 1 3   | 1 9    | doz. bnehs. ...          | 3 0   | 4 0     |
| Cattleyas, doz. ...       | 9 0   | 0 0    | ,, yellow, doz. bnehs.   | 1 6   | 2 0     |
| Chrysanthemums, doz.      |       |        | Myrtle, English, per     |       |         |
| bun. ...                  | 3 0   | 4 0    | bunch ...                | 0 6   | 0 0     |
| ,, doz. blooms            | 1 0   | 4 0    | Odontoglossums ...       | 4 0   | 0 0     |
| Croton foliage, bun. ...  | 0 9   | 1 0    | Orange blossom, bunch    | 2 0   | 0 0     |
| Cycas leaves, each ...    | 0 9   | 1 6    | Roses, Niphetos, white,  |       |         |
| Cypripediums, doz. ...    | 2 0   | 3 0    | doz. ...                 | 1 6   | 2 6     |
| Eucharis, doz. ...        | 3 0   | 4 0    | ,, pink, doz. ...        | 2 0   | 3 0     |
| Gardenias, doz. ...       | 2 0   | 3 0    | ,, yellow, doz. (Perles) | 1 6   | 3 0     |
| Geranium, scarlet, doz.   |       |        | ,, Generals... ..        | 0 6   | 1 0     |
| bnehs. ...                | 4 0   | 5 0    | Smilax, bunch ...        | 2 6   | 0 0     |
| Ivy leaves, doz. bun. ... | 1 6   | 0 0    | Stephanotis, doz. pips   | 0 0   | 3 0     |
| Lilium Harrisi ...        | 4 0   | 5 0    | Tuberoses, dozen... ..   | 0 6   | 0 0     |
| ,, lancifolium alb.       | 1 6   | 2 0    | Violets, doz. bun. ...   | 1 0   | 1 6     |
| ,, l. rubrum... ..        | 2 0   | 0 0    | ,, Marie Louise... ..    | 2 6   | 3 0     |
| ,, longiflorum ...        | 4 0   | 5 0    |                          |       |         |



## Horse and Motor Power.

After a succession of dry seasons and stunted crops, we have been treated to the other extreme, and although personally we have not much to complain of, there is reason to believe that a great number of farmers will have little pleasure in looking back to the season of 1902. No doubt farmers of grass land have had a good year, with an excellent prospect for the near future, but the profit from arable culture is so meagre and uncertain that it is only by concentrated effort to keep the expenses of the farm down that a living profit can be realised at all.

A very large portion of the arable land of the country is let at 20s. per acre or less, and in many cases labour bill on those same farms exceeds three times that amount, and farmers should see that they are not wasting money in a lax manner on labour before going to their landlords for reduction of rent. In writing of labour we are not confining ourselves to manual labour. Expensive and difficult to obtain as hand labour is, it is for many purposes quite as cheap and more effectual than horse-power. The horses of the farm cost us much more than we think. In reckoning the expenses of keeping horses we are apt to allow too little for grass, Clover, hay, bedding, roots, &c. These all come off the farm, and as they are not to pay for we do not bring them into the balance sheet. But all the food consumed by horses is of as much value when consumed by them as it would be if devoted to feeding cattle, sheep, or pigs. In fact it should be charged at a higher rate, because the manurial residue is of less value from horses than it is from cattle or sheep.

When a labourer has finished work he goes home and feeds himself. The horse has to be taken home, fed, and tended, both late and early, and there is great and increasing difficulty in getting this necessary work done punctually and in a proper manner. With the great educational progress that we are promised, it is most unlikely that village lads will much longer consent to rise at 4 a.m., feed the horses and themselves, and be at work ploughing soon after six, and this difficulty will lead to the partial disuse of horses on the land. Already we hear of experiments being made in motor traction. Successful trials have been made not only in drawing reapers in the harvest field but in ploughing and cultivating stubbles, and it seems quite within the bounds of probability that motors may become regular parts of the farm machinery. If, as is claimed, the cost for fuel be only 1d. per horse power per hour, there can be no doubt that they will prove cheaper to use than horses, for 1d. per hour for a nine hours' day would amount to no more than 4s. 6d. per week, which is not half the cost of a horse.

There is another point: The horse eats every day,

whether working or not. The motor only burns fuel when wanted. Their capabilities to do farm work may be limited for a time until by experiment and improvement they are adapted to land work and farm requirements, but that oil engines will be so adapted seems to be a moral certainty.

It is surprising that steam traction has not been more used in delivering grain, especially during the autumn, when so much corn is marketed, and there is always plenty of work for the farm horses without any waggoning. On a large farm a traction engine might be constantly employed in threshing, cutting, grinding, &c., apart from any possibilities of work on the lands.

At first motor power must be limited to work on farm land, and they can hardly be adapted to work amongst Potato and Turnip ridges, but man's power of inventiveness is so wide that it would be unwise to speak too positively as to that. What is needed for farm work is an engine which can move freely on the land and drag a good-sized cultivator with ease. Three and four furrow ploughs will be used, according to the class of work needed. By the use of roomy deep-sided rullies an engine might do all the Mangold and Turnip carting, besides delivering all the corn and Potatoes. There are many farms in the country which grow as many Potatoes as would keep a traction engine employed during the great part of the winter.

What are the Americans doing in this matter? Information on that point would be valuable. They generally lead the van in economic progress, and they have the necessary fuel in the shape of petroleum. The substitution of the engine for the horse would remove one of the interesting features of country life, but we do not suggest that the horse will be banished altogether, and admirers of the animal need not fear that such will be the case, but we do think that he will lose to a great extent the prominent position he now occupies. Some people will raise objections to the discarding of horse power because it would have a tendency to restrict the demand for Oats and other forms of horse corn, and the farmer would lose as much as he would gain. Well! cycles and motor cars have not prevented Oats reaching a high price during the past year, and we fancy that a foreign product called Maize is more in use amongst farm horses than any form of home produce.

## Work on the Home Farm.

Another grand week, almost summer-like, and we hope our belated friends have finished harvest at last. For ourselves we have been laying the foundation of another by getting our Wheat in, and if the finish is as good as the start we shall be fortunate.

We are pulling and storing Mangolds now, and find them smaller than last year. The heap will certainly be a less one, but, fortunately, other roots are plentiful. We shall pie a good lot of Swedes after Martinmas. The weather prophets are promising us a severe winter, not that we have the slightest faith in their knowledge, but Swedes are big this year, and stand well out of the ground, so are more liable to frost injury than usual.

Those we store for cattle use we shall top as we do the Mangolds. Those for sheep food will be pulled up and thrown into heaps, tops and all, and then covered with soil. Good Potatoes are now making 60s. on rails, and fair quantities are being moved. There is an idea amongst growers that the tuber is going to reach a high price. We do not agree with them, and fancy the crop will prove ample for all requirements. There is very little disease, and 60s. for immediate delivery is a handy price.

On mixed farms the cattle should be all in the yards, or at any rate receiving good rations of dry food.

We saw a number of beasts the other day on a bare pasture; there were no troughs or tumbrils visible, and they looked very thin and empty. There is no economy in starving meat-producing animals. The most successful farmers are those who keep all their stock in good condition. It is the same with all farm animals. Pork keeps very dear, and never did pigs pay better for good food. At 6d. and 6½d. per lb. there is excellent profit on the value of pig food, and as we said last week, sound food is better than offals.

Of course on a farm there is a good deal of tail corn to consume by pigs or poultry, but when the corn or meal is poor in quality an extra allowance should be given. If farmers fed their poultry better they would get a vast increase of eggs. As a rule the master takes no practical interest in the egg basket, and in many cases when he does it is an antagonistic one. The feeding is too often left in undesirable hands, and the corn which is debited to the poultry finds its way to other mouths. Cart horses get a good deal of hen corn, the hens lay badly, the mistress grumbles, and the master says poultry keeping is unprofitable. But whose fault is it?

# ROSES.

**OUR  
CORONATION  
YEAR  
SUCCESSES:**

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The Champion Cup of the  
National Rose Society,  
value 50 guineas.

(For the fifth time.)

The Gunnersbury Park  
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Two Coronation Rose  
Show Cups at the  
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Four Gold Medals.

Two for our New Rose  
"Lady Roberts."

Thirteen Silver & Silver-  
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Besides upwards of 50 other  
First and Second Prizes for  
Roses during Coronation Year.

**Our Descriptive List  
is Now Ready.**

**FRANK CANT & CO.,**  
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**For Present Planting**

## CLIBRANS

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**New or Recent Varieties.**

WE append a list of a few choice varieties of various classes of fruit. We make a feature of high-class fruit, and are in an unique position to supply trees and plants of the highest excellence.

### NEW APPLE, "Rival."

**Award of Merit, R.H.S., Oct. 9th, 1900.**

The outcome of a cross between Peasgood Nonsuch and Cox's Orange Pippin. A superb variety equally good for dessert or culinary use. A good grower, and free bearer. Experts and the Press are unanimous upon its merits. Maidens, 2/6 each; Two Year Trees, 5/- each.

### NEW APPLE, "Charles Ross."

**First-Class Certificate, R.H.S., Oct. 10th, 1899**

A grand new dessert variety. The fruits are of large size and of handsome appearance. The flesh is rich and of a delicious flavour. This variety is undoubtedly destined to take a high position among dessert fruits. Maidens, 3/6 and 5/- each; Two Year Trees, 15/- each.

### NEW PEAR, "Charles Ernest."

**Award of Merit, R.H.S., Dec. 4th, 1900.**

For late use, this variety will prove to be a welcome addition. The fruits are of large size, pyriform in shape, with a yellow skin; flesh very juicy and melting. Maidens, 1/6 each.

### NEW PEAR, "Winter Orange."

**Award of Merit, R.H.S., March, 1899.**

Without doubt this is a splendid variety for stewing purposes. The fruits are of large size, and remain in good condition until April or May. The fruits possess a delicious flavour, and are produced in great abundance. Maidens, 1/6 each.

### NEW DESSERT CHERRY, "Noble."

**First-Class Certificate, R.H.S., July 25th, 1899**

Fruits large, firm, deep blood red in colour, delicious flavour; produced in the greatest abundance. The tree is of strong and vigorous constitution, and pronounced to be the finest variety introduced during recent years. Dwarf Maidens, 3/6 each.

### NEW GOOSEBERRY, "Victoria."

A splendid new variety, of strong and vigorous constitution; a most prolific bearer, the branches being literally packed with fruit of excellent flavour. The fruits ripen about seven days earlier than do those of "Whinham's Industry." Strong Fruiting Plants, 1/- each; 10/- per doz.

### NEW GOOSEBERRY, "Howard's Lancer."

**Award of Merit, R.H.S., August 13th, 1901.**

A variety of great promise. The fruits are of large size, and of pleasant flavour. An immense cropper. Equally good for early or late use. Price, Strong Two Year Bushes, 3/- per doz.

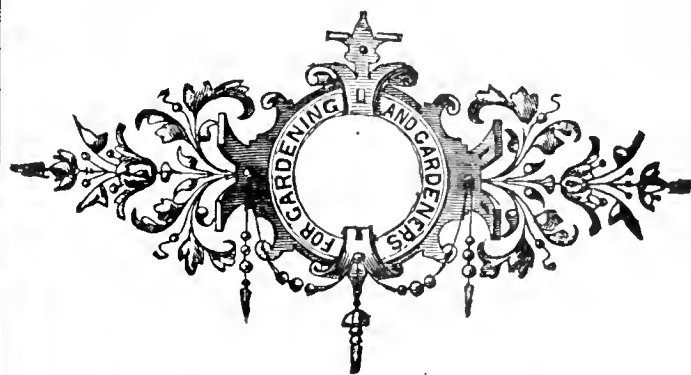
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MANCHESTER.**



*Journal of Horticulture.*

THURSDAY, NOVEMBER 20, 1902.

## Rose Analysis, 1895-1902.



IN my last Rose Analysis, which appeared in the *Journal of Horticulture* on October 31st, 1901, will be found an explanation, should this be desired, of the method adopted in the compilation of these analyses, of which the present one is the seventeenth of the series. In any case it may be well to explain that the positions of the different varieties in the accompanying tables are dependent upon the average number of times they were staged in the first, second, and third prize stands at the last eight metropolitan exhibitions of the National Rose Society. That is to say, the full eight years' average is given in the great majority of cases, but where the varieties have not been out a sufficient time to allow of this being done the longest trustworthy average is given them instead. The necessity of a fairly long average will be understood when it is considered how the results must from year to year be affected by early and late seasons.

Take, for instance, the past Rose season as an extreme example. The cold weather in May and the first three weeks in June caused the growth of Rose plants to be exceptionally backward this year. Indeed, as late as Midsummer Day fears were entertained that there would be but very few Roses in bloom even in the south of England on July 2nd, the date fixed for the National Rose Society's Exhibition in the Temple Gardens. Fortunately a change to warmer conditions took place about ten days before the exhibition, and lasted until the show day, with the result that after all most of the classes in the schedule were well filled and a most enjoyable and interesting exhibition was held. The effect, however, of the previous cold spell will be clearly traceable in

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the present analysis if the figures given in the third column in the tables be compared with those in the second column. It will then be noticed that while the early-flowering varieties were mostly shown at the last exhibition in unusual numbers, those which flower later in the season were, as a rule, but sparsely represented.

For the first time for ten years that grand variety Mrs.

John Laing no longer heads the list of Hybrid Perpetuals and Hybrid Teas, its place having been taken, as I suggested last year was probable, by Bessie Brown, a Hybrid Tea of recent introduction. The late season may no doubt have favoured to some extent the latter variety, but then on the other hand it must be borne in mind how heavily handicapped Bessie Brown must have been by its youth—having

### HYBRID PERPETUALS AND HYBRID TEAS.

| Position in Present Analysis. | Average Number of Times Shown. | No. of Times shown in 1902 in True Relative Proportion to the Average. | Name.                               | Date of Introduction. | Raiser's or Introducer's Name. | Colour.                          |
|-------------------------------|--------------------------------|--|-------------------------------------|-----------------------|--------------------------------|----------------------------------|
| *1                            | 46.0                           | 46   | Bessie Brown (H.T.) .....           | 1899                  | A. Dickson & Sons ..           | Creamy white                     |
| 2                             | 44.7                           | 28   | Mrs. John Laing .....               | 1887                  | Bennett .....                  | Rosy pink                        |
| 3                             | 39.0                           | 43   | Caroline Testout (H.T.) .....       | 1890                  | Pernet-Ducher .....            | Light salmon pink                |
| 4                             | 37.5                           | 23   | Ulrich Brunner .....                | 1881                  | Levet .....                    | Cherry red                       |
| 5                             | 34.7                           | 38   | Mrs. W. J. Grant (H.T.) .....       | 1895                  | A. Dickson & Sons ..           | Bright rosy pink                 |
| 6                             | 34.4                           | 36   | Mrs. R. G. Sharman-Crawford .....   | 1894                  | A. Dickson & Sons ..           | Clear rosy pink                  |
| 7                             | 33.2                           | 38   | Marquise Litta (H.T.) .....         | 1893                  | Pernet-Ducher .....            | Carmine rose, bright centre      |
| 8                             | 32.6                           | 37   | Kaiserin Augusta Victoria (H.T.) .. | 1891                  | Lambert & Reiter ..            | Cream, shaded lemon              |
| 9                             | 31.7                           | 27   | A. K. Williams .....                | 1877                  | Schwartz .....                 | Bright carmine red               |
| 10                            | 29.7                           | 41   | La France (H.T.) .....              | 1867                  | Guillot .....                  | Silvery rose, shaded lilac       |
| 11                            | 28.9                           | 9  | Her Majesty .....                   | 1885                  | Bennett .....                  | Pale rose                        |
| 12                            | 26.4                           | 28   | Captain Hayward .....               | 1893                  | Bennett .....                  | Scarlet crimson                  |
| 13                            | 26.2                           | 14   | Gustave Piganeau .....              | 1889                  | Pernet-Ducher .....            | Shaded carmine                   |
| 14                            | 25.5                           | 17   | Suzanne M. Rodocanachi .....        | 1883                  | Lévêque .....                  | Glowing rose                     |
| 15                            | 23.7                           | 22   | Madame Gabriel Luizet .....         | 1877                  | Liabaud .....                  | Light silvery pink               |
| 16                            | 22.1                           | 22   | Horace Vernet .....                 | 1866                  | Guillot .....                  | Scarlet crimson, dark shaded     |
| 17                            | 19.0                           | 4  | Alfred Colomb .....                 | 1865                  | Lacharme .....                 | Bright carmine red               |
| 18                            | 18.9                           | 12   | Marie Baumann .....                 | 1863                  | Baumann .....                  | Soft carmine red                 |
| 19                            | 17.8                           | 30   | White Lady (H.T.) .....             | 1890                  | W. Paul & Son .....            | Creamy white                     |
| 20                            | 16.5                           | 16   | Charles Lefebvre .....              | 1861                  | Lacharme .....                 | Purplish crimson                 |
| 20                            | 16.5                           | 9  | Dupuy Jamain .....                  | 1868                  | Jamain .....                   | Bright cerise                    |
| 20                            | 16.5                           | 23   | Helen Keller .....                  | 1895                  | A. Dickson & Sons ..           | Rosy cerise                      |
| 23                            | 16.4                           | 14   | Prince Arthur .....                 | 1875                  | B. R. Cant .....               | Bright crimson                   |
| 24                            | 16.3                           | 11   | Margaret Dickson .....              | 1891                  | A. Dickson & Sons ..           | Ivory white                      |
| *25                           | 16.0                           | 16   | Ulster .....                        | 1899                  | A. Dickson & Sons ..           | Salmon pink                      |
| 26                            | 15.7                           | 7  | François Michelin .....             | 1871                  | Levet .....                    | Deep rose, reverse silvery       |
| 26                            | 15.7                           | 0  | Marchioness of Londonderry .....    | 1893                  | A. Dickson & Sons ..           | Ivory white                      |
| 28                            | 15.6                           | 6  | Earl of Dufferin .....              | 1887                  | A. Dickson & Sons ..           | Dark crimson, shaded maroon      |
| 29                            | 15.0                           | 16   | Killarney (H.T.) .....              | 1898                  | A. Dickson & Sons ..           | Pale pink, shaded white          |
| 30                            | 13.7                           | 9  | Etienne Levet .....                 | 1871                  | Levet .....                    | Carmine rose                     |
| 31                            | 13.4                           | 12   | Fisher Holmes .....                 | 1865                  | E. Verdier .....               | Shaded crimson scarlet           |
| 32                            | 13.0                           | 11   | Duke of Wellington .....            | 1864                  | Granger .....                  | Bright shaded crimson            |
| 33                            | 12.8                           | 19   | Marchioness of Downshire .....      | 1894                  | A. Dickson & Sons ..           | Light pink, shaded rose          |
| 34                            | 11.7                           | 2  | Comte de Raimbaud .....             | 1868                  | Roland .....                   | Clear crimson                    |
| 34                            | 11.7                           | 16   | Lady Mary Fitzwilliam (H.T.) ....   | 1882                  | Bennett .....                  | Rosy flesh                       |
| 34                            | 11.7                           | 7  | Victor Hugo .....                   | 1884                  | Schwartz .....                 | Dazzling crimson, shaded         |
| 37                            | 11.6                           | 5  | Marchioness of Dufferin .....       | 1891                  | A. Dickson & Sons ..           | Pink                             |
| 38                            | 10.7                           | 9  | Countess of Caledon (H.T.) .....    | 1897                  | A. Dickson & Sons ..           | Carmine rose                     |
| 38                            | 10.7                           | 11   | Duke of Edinburgh .....             | 1868                  | Paul & Son .....               | Scarlet crimson                  |
| 38                            | 10.7                           | 14   | Général Jacqueminot .....           | 1853                  | Roussel .....                  | Bright scarlet crimson           |
| 41                            | 10.1                           | 5  | Louis Van Houtte .....              | 1869                  | Lacharme .....                 | Deep crimson, shaded maroon      |
| 42                            | 10.0                           | 6  | Tom Wood .....                      | 1896                  | A. Dickson & Sons ..           | Brownish red                     |
| 43                            | 9.9                            | 10   | Dr. Andry .....                     | 1864                  | E. Verdier .....               | Bright crimson                   |
| 44                            | 9.2                            | 6  | Marie Verdier .....                 | 1877                  | E. Verdier .....               | Pure rose                        |
| 45                            | 9.1                            | 6  | Xavier Olibo .....                  | 1864                  | Lacharme .....                 | Dark velvety crimson             |
| *46                           | 9.0                            | 9  | Mildred Grant (H.T.) .....          | 1901                  | A. Dickson & Sons ..           | Ivory white, shaded pink         |
| *46                           | 9.0                            | 9  | Mrs. Cocker .....                   | 1899                  | Cocker .....                   | Pale pink                        |
| 48                            | 8.7                            | 4  | E. Y. Teas .....                    | 1874                  | E. Verdier .....               | Bright red                       |
| 49                            | 8.6                            | 2  | Baroness Rothschild .....           | 1867                  | Pernet .....                   | Light pink                       |
| 49                            | 8.6                            | 2  | Merveille de Lyon .....             | 1882                  | Pernet .....                   | White                            |
| 51                            | 8.1                            | 11   | Heinrich Schultheis .....           | 1882                  | Bennett .....                  | Pinkish rose                     |
| 51                            | 8.1                            | 4  | Madame Eugène Verdier .....         | 1878                  | E. Verdier .....               | Silvery rose                     |
| 53                            | 7.9                            | 7  | Ferdinand de Lesseps .....          | 1869                  | E. Verdier .....               | Shaded crimson                   |
| 54                            | 7.7                            | 12   | Beauty of Waltham .....             | 1862                  | W. Paul & Son .....            | Rosy crimson                     |
| 54                            | 7.7                            | 2  | Duchess of Bedford .....            | 1879                  | Postans .....                  | Light scarlet crimson            |
| 56                            | 7.5                            | 1  | Duchesse de Morny .....             | 1863                  | E. Verdier .....               | Silvery rose                     |
| 57                            | 7.4                            | 4  | Jeannie Dickson .....               | 1890                  | A. Dickson & Sons ..           | Soft silvery rose                |
| 58                            | 7.3                            | 11   | Madame Cadeau-Ramey (H.T.) ....     | 1896                  | Pernet-Ducher .....            | Rosy flesh, yellow base          |
| 59                            | 7.1                            | 10   | Duke of Teck .....                  | 1880                  | Paul & Son .....               | Light crimson scarlet            |
| 60                            | 7.0                            | 4  | Camille Bernardin .....             | 1865                  | Gautreau .....                 | Light crimson                    |
| *60                           | 7.0                            | 7  | Papa Lambert (H.T.) .....           | 1899                  | P. Lambert .....               | Pinkish rose                     |
| 62                            | 6.3                            | 11   | Rev. A. Cheales .....               | 1896                  | Paul & Son .....               | Pure lake, silvery white reverse |
| 63                            | 6.0                            | 6  | Abel Carrière .....                 | 1875                  | E. Verdier .....               | Crimson maroon, shaded purple    |
| 63                            | 6.0                            | 7  | Le Havre .....                      | 1871                  | Eude .....                     | Vermilion red                    |
| 65                            | 5.6                            | 4  | Pride of Waltham .....              | 1881                  | W. Paul & Son .....            | Salmon pink, shaded              |
| 66                            | 5.5                            | 6  | Souvenir du Président Carnot (H.T.) | 1895                  | Pernet-Ducher .....            | Flesh, shaded white              |

\* New varieties, whose positions are dependent on their records for the 1902 show only.

been sent out only three years ago, whereas Mrs. John Laing has been largely grown by exhibitors since 1890. It is very gratifying to be able to state that both of these varieties were raised in the British Isles. For exhibition purposes the beautiful creamy white blooms of Bessie Brown may of the two be finer and more certain, but we must never forget the sterling virtues of that recently dethroned queen, Mrs. John Laing. For after all there is still no other Rose in its class possessing so many fine qualities, particularly if its merits on the exhibition table and in the garden be taken together. Curiously enough, four out of the leading six varieties in the table are pink Roses—Mrs. John Laing (No. 2), Caroline Testout (No. 3), Mrs. W. J. Grant (No. 5), and Mrs. R. G. Sharman Crawford (No. 6). Then a little lower down we come to La France (No. 10) and Her Majesty (No. 11), making six pink varieties in the first twelve.

The following established kinds, Caroline Testout, Mrs. W. J. Grant, Marquise Litta, Kaiserin Augusta Victoria, and White Lady have never before been as frequently staged as they were at this year's exhibition; while La France has the best record for ten years. It will be noticed, as has been before pointed out, how greatly the late season favoured the early flowering varieties. On the other hand, those Roses which as a rule flower late or in the middle of the season, were at that show placed at a great disadvantage. For instance, Gustave Piganeau, Alfred Colomb, Marie Baumann and Marchioness of Londonderry have never before, and Mrs. John Laing, Ulrich Brunner, Her Majesty, S. M. Rodocanachi and Dupuy Jamain have only once before been as poorly represented. A. K. Williams, which is generally regarded as an early Rose, was this year, strange to relate, to be seen in fewer stands than at any previous exhibition.

There are seven of the newer Roses on the list—varieties which are five or fewer years old. Of these, the rosy carmine Countess of Caledon, which was sent out in 1897, has only slightly improved on the position it occupied in the previous analysis. The delightful pale pink Killarney (No. 29), which

was distributed in 1898, rises four places. Of the four 1899 varieties Bessie Brown, as before stated, occupies, for the first time, the premier position on the list—a remarkable feat for so young a Rose. Ulster (No. 25), which is salmon-pink in colour, rises three places, and Mrs. Cocker, another pale pink variety, not before a candidate for honours in these tables, will be found at No. 46. Papa Lambert, salmon-rose in colour, on its first appearance in the list, takes a place at No. 60. The beautiful ivory-white Mildred Grant, although only sent out last year, secures a position at No. 46. If we may judge from the splendid form in which it was exhibited in some of the stands at the Temple Rose Show in July last, this variety is certain shortly to occupy a very prominent place in the table. Its great size, good form, and the depth and substance of its petals, at once mark it as a grand exhibition variety. All these new Roses are of British origin except one. The five leading sorts, Bessie Brown, Ulster, Killarney, Countess of Caledon, and Mildred Grant were raised by Messrs. A. Dickson and Sons, of Newtownards, Ireland; the next on the list, Mrs. Cocker, by Messrs. J. Cocker and Sons, Aberdeen, and the foreign variety, Papa Lambert, by P. Lambert, of Trier, in Germany.

The progress that is being made by the Hybrid Teas is even more pronounced than last year. There are now fourteen instead of ten Roses in the table, while six of them are among the ten varieties with the highest records—to say nothing of a Hybrid Tea for the first time capturing the premier place. Among the coming candidates for fame may be mentioned four very promising Hybrid Teas now being sent out by Messrs. A. Dickson and Sons, viz., Alice Lindsell, creamy white; Duchess of Portland, after the style and colour of Kaiserin Augusta Victoria; Edith D'Ombra, white; and Lady Moyra Beauclerc, a very distinct shade of rose colour.

In my last analysis I stated that as regards the Hybrid Perpetuals the advances made were by no means as encouraging. This is, however, no longer quite as true as it was then, for there are two new varieties of sterling merit in that section which are likely to be very largely grown and exhibited

# TEAS AND NOISETTES.

| Position in Present Analysis. | Average Number of Times Shown. | No. of Times Shown in 1902 in True Relative Proportion to the Average. | Name.                          | Date of Introduction. | Raiser's or Introducer's Name. | Colour.                         |
|-------------------------------|--------------------------------|--|--------------------------------|-----------------------|--------------------------------|---------------------------------|
| 1                             | 48.7                           | 52   | Maman Cochet.....              | 1893                  | Cochet .....                   | Deep flesh, suffused light rose |
| 2                             | 42.5                           | 42   | White Maman Cochet .....       | 1897                  | Cook .....                     | White, tinged lemon             |
| 3                             | 39.1                           | 32   | The Bride .....                | 1885                  | May .....                      | White, tinged lemon             |
| 4                             | 37.9                           | 33   | Catherine Mermet .....         | 1869                  | Guillot .....                  | Light rosy flesh                |
| *5                            | 34.0                           | 34   | Mrs. Edward Mawley .....       | 1899                  | A. Dickson & Sons..            | Pink, tinted carmine            |
| 6                             | 33.7                           | 29   | Comtesse de Nadaillac .....    | 1871                  | Guillot .....                  | Peach, shaded apricot           |
| 7                             | 30.4                           | 7  | Innocente Pirola .....         | 1878                  | Madame Ducher....              | Creamy white                    |
| 8                             | 29.2                           | 34   | Madame Cusin .....             | 1881                  | Guillot .....                  | Violet rose, yellow base        |
| 9                             | 28.6                           | 30   | Souvenir de S. A. Prince ..... | 1889                  | Prince .....                   | Pure white                      |
| 10                            | 27.5                           | 25   | Bridesmaid .....               | 1893                  | May .....                      | Bright pink                     |
| 11                            | 26.2                           | 20   | Madame Hoste.....              | 1887                  | Guillot .....                  | Pale lemon yellow               |
| 12                            | 24.0                           | 23   | Souvenir d'un Ami .....        | 1846                  | Belot-Defougère ...            | Pale rose                       |
| 13                            | 23.0                           | 18   | Muriel Grahame .....           | 1896                  | A. Dickson & Sons..            | Pale cream, flushed rose        |
| 14                            | 22.7                           | 27   | Souvenir d'Elise Vardon .....  | 1854                  | Marest .....                   | Cream, tinted rose              |
| 15                            | 21.0                           | 13   | Madame de Watteville .....     | 1883                  | Guillot .....                  | Cream, bordered rose            |
| 15                            | 21.0                           | 25   | Medea.....                     | 1891                  | W. Paul & Son ....             | Lemon yellow                    |
| 17                            | 20.1                           | 19   | Maréchal Niel (N.) .....       | 1864                  | Pradel .....                   | Deep bright golden yellow       |
| 18                            | 19.4                           | 8  | Ernest Metz .....              | 1888                  | Guillot .....                  | Salmon, tinted rose             |
| 19                            | 16.9                           | 7  | Marie Van Houtte .....         | 1871                  | Ducher .....                   | Lemon yellow, edged rose        |
| 20                            | 15.3                           | 23   | Cleopatra .....                | 1889                  | Bennett .....                  | Creamy flesh, shaded rose       |
| 21                            | 15.0                           | 10   | Caroline Kuster (N.) .....     | 1872                  | Pernet .....                   | Lemon yellow                    |
| 21                            | 15.0                           | 12   | Honourable Edith Gifford.....  | 1882                  | Guillot .....                  | White, centre flesh             |
| 23                            | 13.7                           | 5  | Niphetos .....                 | 1844                  | Bougère.....                   | White                           |
| 24                            | 12.2                           | 4  | Princess of Wales .....        | 1882                  | Bennett.....                   | Rosy yellow                     |
| 25                            | 11.4                           | 13   | Anna Olivier.....              | 1872                  | Ducher .....                   | Pale buff, flushed              |
| 26                            | 11.2                           | 13   | Golden Gate.....               | 1892                  | Dingee & Conard ..             | Creamy white, tinted rose       |
| 27                            | 9.4                            | 5  | Ethel Brownlow .....           | 1887                  | A. Dickson & Sons..            | Rosy flesh, shaded yellow       |
| 28                            | 8.4                            | 5  | Jean Ducher.....               | 1874                  | Madame Ducher....              | Salmon yellow, shaded peach     |
| 29                            | 7.9                            | 7  | Rubens .....                   | 1859                  | Robert .....                   | White, shaded creamy rose       |
| 30                            | 6.7                            | 4  | Francisca Krüger .....         | 1879                  | Nabonnand .....                | Coppery yellow, shaded peach    |
| 31                            | 6.4                            | 7  | Madame Bravy .....             | 1848                  | Guillot .....                  | White, flushed pink             |
| 32                            | 5.1                            | 6  | Etoile de Lyon.....            | 1881                  | Guillot .....                  | Deep lemon                      |

\* A new variety, whose position is dependent on its record for the 1902 show only.



during the coming year. I refer to Bent Cant and Frau Karl Druschki. The former will be a most welcome addition to the dark crimson H.P.'s, as it is a good grower and the flowers well shaped, with high pointed centres. Its great charm, to my mind, consists in its stout clean cut petals—most desirable qualities in any exhibition Rose. This fine variety was raised by Messrs. B. R. Cant and Sons, of Colchester. Frau Karl Druschki appears to me a splendid acquisition. For years the great want among the H.P.'s has been a really good pure white variety, and in our anxiety to secure this treasure we have hitherto been content to welcome any sort which appeared to supply this long felt want, but all have proved more or less disappointing—falling short in one way or another of what a really high-class white Hybrid Perpetual ought to be. If I may judge from the plants of Frau Karl Druschki I saw recently in the Colchester Nurseries, the Rose required has at last made its appearance. It is not only a pure white Hybrid Perpetual, but appears to possess besides more good qualities than fall to the lot of most of the choicest varieties in that section. Its growth is all that could be desired, while the flowers are large, deep and well-formed, with petals of good substance. It is, moreover, a true perpetual, in fact, at the time of my visit, October 14, I did not notice any other Rose which was flowering as well or so freely.

#### Teas and Noisettes.

Coming now to the table of Teas and Noisettes, it will be observed that Maman Cochet again heads the list with its lemon-white sport, White Maman Cochet taking second place, the very positions Catherine Mermet and The Bride had previous to last year so long held. The leading flower, Maman Cochet, was not shown in quite as many stands as at the Temple Rose Show in 1901; but, nevertheless, has again a higher record than any other Rose whatever in the show. White Maman Cochet too, has well maintained its position, taking as it does the fourth place among the highest records even when both tables are taken together. Madame Cusin and Cleopatra have only once before been as frequently staged as they were this year, while Souvenir d'Elise Vardon and Medea were also unusually well represented. On the other hand, The Bride, Innocente Pirola, Muriel Grahame, and Ernest Metz, since they first came into general cultivation, have never before, and Madame de Watteville only once before, been as sparsely exhibited.

There are still only three new Teas on the list—those which are six or less years old. Fortunately all three are valuable additions to this section and occupy good positions in the table. Muriel Grahame (No. 13), the pale cream sport from Catherine Mermet sent out in 1896, on account of its poor record this year, does not occupy quite as good a position as in the last analysis. White Maman Cochet, an 1897 variety, has already been referred to. Mrs. Edward Mawley, distributed in 1899, owing no doubt in some measure to its early flowering habit, was this year very largely exhibited, and has consequently risen from No. 15 to No. 5. There are two new Teas which are certain to be added to the list another year. I refer to Lady Roberts and Souvenir de Pierre Notting. The former is a most charming apricot-yellow sport of Anna Olivier, which is being sent out for the first time this autumn by Messrs. Frank Cant and Co., of Colchester. The colour of this Rose alone must ensure its becoming a general favourite. Souvenir de Pierre Notting was raised by Soupert et Notting, and if large enough, its beautiful coppery-yellow blooms will be a welcome addition to any stand.

#### Garden Roses.

As will have been gathered from the preceding remarks, very satisfactory progress is being made in Roses of the exhibition type, but it is as nothing compared with the present inrush of "Garden" or decorative Roses. By "Garden" Roses is meant those varieties which are either not sufficiently large or not sufficiently full and perfect in form to allow of the individual blooms being set up separately like the Roses with which we have previously been dealing. Unlike the so-called exhibition varieties, this class of Rose is staged at the shows in large bunches. So popular a feature have these exhibits of "Garden" Roses become, that no Rose show would be considered in the present day complete without them. In the following table the varieties are arranged according to the total number of times they were staged in the prizewinning stands at the last three metro-

politan exhibitions of the National Rose Society, and no Rose has been included which has not been exhibited at one or other of those shows three or more times.

#### Garden and Decorative Roses.

| Position in analysis. | Name.  | Total No. of times staged in the three years. | No. of times staged in 1900. | No. of times staged in 1901. | No. of times staged in 1902. |
|-----------------------|--|---|------------------------------|------------------------------|------------------------------|
| 1                     | Gustave Regis (H.T.) . . . . .                   | 29  | 11                           | 11                           | 7                            |
| 1                     | William Allen Richardson (N.)                    | 29  | 7                            | 10                           | 12                           |
| 3                     | Marquise de Salisbury (H.T.)                     | 26  | 9                            | 9                            | 8                            |
| 4                     | Madame Pernet Ducher (H.T.)                      | 24  | 8                            | 8                            | 8                            |
| 5                     | Rosa macrantha (S.) . . . . .                    | 21  | 8                            | 8                            | 5                            |
| 6                     | Camœns (H.T.) . . . . .                          | 19  | 6                            | 7                            | 6                            |
| 6                     | Madame Chédane Guinois-seau (T.) . . . . .       | 19  | 7                            | 6                            | 6                            |
| 6                     | Reine Olga de Wurtemberg (H.T.) . . . . .        | 19  | 6                            | 4                            | 9                            |
| 9                     | Turner's Crimson Rambler (Cl. Poly.) . . . . .   | 18  | 4                            | 10                           | 4                            |
| 10                    | Paul's Carmine Pillar (S.) ..                    | 17  | 4                            | 5                            | 8                            |
| 11                    | Bardou Job (H.T.) . . . . .                      | 15  | 6                            | 6                            | 3                            |
| 11                    | Souvenir de Catherine Guillot (T.) . . . . .     | 15  | 3                            | 7                            | 5                            |
| 13                    | Claire Jacquier (Cl. Poly.) ..                   | 13  | 4                            | 4                            | 5                            |
| 13                    | Madame Falcot (T.) . . . . .                     | 13  | 5                            | 5                            | 3                            |
| 13                    | Papillon (T.) . . . . .                          | 13  | 2                            | 5                            | 6                            |
| 16                    | Alister Stella Gray (N.) ....                    | 12  | 4                            | 7                            | 1                            |
| 17                    | Anne of Geierstein (Sweet Briar) . . . . .       | 11  | 4                            | 3                            | 4                            |
| 17                    | Ma Capucine (T.) . . . . .                       | 11  | 5                            | 2                            | 4                            |
| 19                    | Homère (T.) . . . . .                            | 10  | 1                            | 5                            | 4                            |
| 19                    | L'Idéal (N.) . . . . .                           | 10  | 4                            | 6                            | 0                            |
| 19                    | Rosa multiflora grandiflora (S.)                 | 10  | 3                            | 1                            | 6                            |
| 19                    | Rosa Mundi (Damask) . . . . .                    | 10  | 4                            | 2                            | 4                            |
| 23                    | Crested Moss (Moss) . . . . .                    | 9   | 3                            | 3                            | 3                            |
| 23                    | Hebe's Lip (Sweet Briar) . . . .                 | 9   | 3                            | 3                            | 3                            |
| 23                    | Lady Penzance (Sweet Briar)                      | 9   | 3                            | 1                            | 5                            |
| 23                    | Madame Anna Marie de Montravel (Poly.) . . . . . | 9   | 4                            | 2                            | 3                            |
| 23                    | Mignonette (Poly.) . . . . .                     | 9   | 4                            | 3                            | 2                            |
| 23                    | Paul's Single White (S.) ....                    | 9   | 3                            | 4                            | 2                            |
| 23                    | Perle d'Or (Poly.) . . . . .                     | 9   | 4                            | 2                            | 3                            |
| 23                    | Rosa moschata alba (S.) ....                     | 9   | 3                            | 3                            | 0                            |
| 23                    | The Garland (H.C.) . . . . .                     | 9   | 3                            | 6                            | 0                            |
| 32                    | Laurette Messimy (C.) . . . . .                  | 8   | 5                            | 2                            | 1                            |
| 32                    | Meg Merrilies (Sweet Briar)                      | 8   | 4                            | 1                            | 3                            |
| 34                    | Blanc Double de Coubert (Jap.)                   | 7   | 1                            | 2                            | 4                            |
| 34                    | Brenda (Sweet Briar) . . . . .                   | 7   | 5                            | 0                            | 2                            |
| 34                    | Cecile Brunner (Poly.) . . . . .                 | 7   | 2                            | 2                            | 3                            |
| 34                    | Madame Pierre Cochet (T.) ..                     | 7   | 1                            | 4                            | 2                            |
| 34                    | Red Damask (Damask) . . . .                      | 7   | 3                            | 2                            | 2                            |
| 39                    | Rosa Andersoni (S.) . . . . .                    | 6   | 3                            | 1                            | 2                            |

In addition to the above, the following established varieties were each staged in four prize stands at the last Temple Rose Show, viz:—Rosa multiflora (S.), Mme. Eugène Resal (C.), and Janet's Pride (Sweet Briar). Then among the newer Roses may be mentioned Purity (H.B.), which appeared in six prize stands, Leuchstern (Cl. Poly.) in five prize stands, Thalia (Cl. Poly.), Aglaia (Cl. Poly.), Leonie Lamesch (Poly.), and Irish Glory (S.) in four prize stands, and Euphrosyne (Cl. Poly.), Dawn (H.T.), and Paul's Royal Scarlet in three prize stands.

The introduction of a new class in the schedule this year in which summer-flowering Roses were alone admissible has been of much service, as it has brought to light a good many of the old-fashioned garden Roses, some of which are now very seldom seen. Of these I append a short list:

Blairi No. 2 (H.B.), Celestial (Alba), Commandant Beaurepaire (Gallica), Crested Moss (Moss), Coupe d'Hébé (H.N.), De Meaux (Provence), Double Yellow (Scotch), Flora (Evergreen), Hebe's Lip (Sweet Briar), Juno (H.C.), Ma Surprise (Microphylla), Madame D'Arblay (Musk), Madame Plantier (H.B.), Old Black Moss (Moss), Prolific (Moss), Red Damask (Damask), Rosa Mundi (Gallica), Rosa moschata alba (S.), Rosa Multiflora (S.), Tuscany (Gallica).

My thanks are due to those kind friends who again assisted me in taking down the names of the different Roses in the prize stands at this year's exhibition.

## Roses for General Cultivation.

The following lists have been drawn up with much care with a view to assist those who have but little knowledge of the different kinds of Roses, in making a selection for their own garden. All the established varieties are arranged under the various colours according to their order of merit, so that however small the number of Roses required may be, a satisfactory choice can readily be made. The varieties marked with an asterisk are either quite new or of recent introduction.

## EXHIBITION ROSES WHICH ARE ALSO GOOD GARDEN ROSES.

**HYBRID PERPETUALS.**—*White*: Frau Karl Druschki.\* *Pink*: Mrs. John Laing, Mrs. R. G. Sharman-Crawford. *Crimson*: Ulrich Brunner, Fisher Holmes, Alfred Colomb, Captain Hayward. *Rose*: Suzanne M. Rodocanachi. *Dark Crimson*: Prince Arthur, Prince C. de Rohan, Charles Lefebvre, Ben Cant.\* **HYBRID TEAS.**—*White and Cream*: Kaiserin Augusta Victoria, Mildred Grant.\* *Pink*: La France, Caroline Testout. *Carminé Rose*: Marquise Litta. **TEAS.**—*White*: White Maman Cochet, Souvenir de S. A. Prince. *Pink*: Maman Cochet, Souvenir d'un Ami, Mrs. E. Mawley.\* *Yellow*: Marie Van Houtte, Madame Hoste, Lady Roberts.\*

## GARDEN OR DECORATIVE ROSES.

**SUMMER-FLOWERING.**—**PROVENCE.**—*Pink*: Common. Moss.—*Pink*: Common. *White*: Blanche Moreau. **DAMASK.**—*Striped*: Rosa Mundi. **AUSTRIAN BRIAR.**—*Coppery-red*: Austrian Copper. *Yellow*: Austrian Yellow, Harrisoni. **HYBRID SWEET BRIARS.**—*Coppery Yellow*: Lady Penzance. *White, tipped crimson*: Janet's Pride. *Crimson*: Jeannie Deans. **CLIMBING ROSES.**—*White*: Bennett's Seedling (Ayrshire), Rosa moschata Himalayica (single). *Blush*: The Garland (Hybrid China). *Crimson*: Crimson Rambler (Cl. Polyantha). *Carminé*: Carminé Pillar (single). *Yellow*: Claire Jacquier (Cl. Polyantha).

**AUTUMN-FLOWERING.**—**HYBRID TEAS.**—*White*: Souvenir du Président Carnot, L'Innocence.\* *Blush*: Viscountess Folkestone, Madame A. Guinoisseau, Clara Watson. *Pink*: Killarney,\* Madame A. Chatenay, Camoens. *Rose*: Madame Jules Grolez, Grand Duc A. de Luxembourg. *Crimson*: Grüss an Teplitz, Liberty,\* Bardou Job (semi-double). *Yellow*: Gustave Regis, Madame Ravary.\* **TEAS.**—*Blush*: Dr. Grill, G. Nabonnand. *Pink*: Madame Lambard. *Coppery red*: L'Idéal, Beauté Inconstante, Madame Louis Poncet.\* **BOURBON.**—*Blush*: Souvenir de la Malmaison. **CHINA.**—*White*: Mrs. Bosanquet. *Pink*: Common, Laurette Messimy, Madame E. Resal. *Crimson*: Fabvier. **PERPETUAL SCOTCH.**—*Blush*: Stanwell Perpetual. **POLYANTHA.**—*White*: Madame A. M. de Montravel. *Flesh*: Marie Pavie. *Rose*: Gloire des Polyantha. *Crimson*: Perle des Rouges.\* *Yellow*: Perle d'Or, Eugénie Lamesch.\* **RUGOSA.**—*White*: Blanc Double de Coubert. *Blush*: Fimbriata. *Crimson*: Atropurpurea.\* **CLIMBING ROSES.**—*White*: Madame A. Carrière (H.N.), Aimée Vibert (N.). *Crimson*: Longworth Rambler (H.T.), Reine Olga de Wurtemberg (H.T.), François Crousse\* (T.). *Yellow*: Gloire de Dijon (T.), W. A. Richardson (N.), Alister Stella Gray (N.), Rêve d'Or (N.). **TRAILING ROSES.**—**WICHURIANA.**—*White*: Wichuriana. *Pale Yellow*: Jersey Beauty,\* Alberic Barbier.\* —E. M., Berkhamsted.

## Succession Fig Houses.

Prune and cleanse the trees without delay as soon as the leaves are all down, as this gives no vantage to insects, but, to a great extent, prevents red spider hibernating, and scale now removed stands a chance of the eggs not being produced or of not hatching. Complete any root-pruning or lifting, this being the only sure means of inducing fruitfulness in exuberant trees, combined with restricting the rooting area and a firm soil composed of calcareous material. Trees so treated are more manageable than with an unlimited root space, especially of rich and loose components. Any unfruitful trees should be severely root-pruned, cutting away a corresponding portion of strong, bare, unbranched limbs, leaving sufficient young and promising for covering the trellis, and restrict the roots to moderate-sized borders of firm calcareous materials, and feed from the surfaces, encouraging active feeders there by judicious light mulchings of sweet, rather lumpy, partially decayed manure, which should be added to from time to time during active growth, so as to keep an even mulch of about 1 in in thickness. Sprinklings of chemical manures, especially superphosphates, powdered saltpetre, and ground gypsum will sustain the trees in health and aid development and perfection of almost any amount of crop.—GROWER.



## Chrysanthemum, S. T. Wright.

In conversation with Mr. W. Wells, of Earlswood, who is sending out this splendid new Japanese variety, he recommended that it be treated like Mrs. Barkley; "and," said he, "let it have the sun." Second crown-buds were further commended.

## National Chrysanthemum Society, Floral Committee, Nov. 17.

A few novelties were submitted on this occasion, fewer than has hitherto been customary at this period of the year. First class certificates were awarded to

*George Mileham.*—A large and brilliant reflexing Jap of a bright ruby crimson colour, the long drooping florets, which have a silvery reverse, curling at the points. From Mr. Geo. Mileham, Emlyn House Gardens, Leatherhead.

*Incurved Madge Creagh.*—The surface colour is suffused with pale amaranth, but is hidden by the bright deep yellow reverse of the florets. A neat, compact, and well-formed flower. From Mr. W. Seward, The Firs, Hanwell.

A commendation was given to Ethel Cobb, a handsome, compact, reflexed flower, white with a yellow centre, from Mr. Albert Cobb, The Gardens, Hoodend, Hayes, Middlesex, who also exhibited a large bright yellow reflexed variety named Clara Priest, but too large to be included in the section.

Some pretty single varieties came from Mr. G. W. Forbes, Regent House, Surbiton; they were of the Mary Anderson type, and a commendation was given to a bright yellow, large-flowered variety named Lillias Jones. Ophir, deep pink, bright and pretty, and James Walton, ruby crimson, were the next best.

Market Crimson, a pale ruby crimson, medium-sized Jap, came from Mr. Geo. Carpenter, Byfleet, and was sent as a market variety. Mr. H. Weeks, Thrumpton Hall, Derby, sent J. Martin, of which a dozen blooms were shown. Colour, reddish terra cotta with a golden amber reverse, too small as shown to rank as an exhibition variety.

Japanese Mrs. Dugate, pink suffused with lilac, paler at the base; Jap Rose Holbrook, amaranth, with silvery reverse, a flower of the Australie type; and market Jap Elthorne Gene, a bright, deep reflexed yellow, came from Mr. Wm. Seward. Of the last-named the committee desired to see a plant.

## Groups at the Drill Hall.

Messrs. W. Wells and Co., Limited, Earlswood, Redhill, Surrey, contributed a spacious display of cut Chrysanthemum flowers at Tuesday's meeting of the R.H.S., a selection of select singles being arranged at the back and exhibition Japs in front. A number of meritorious unnamed seedlings were included, but among named varieties there were Miss Mary Anderson, a favourite single; Emily Wells, a rich purplish-mauve; Market Red, a rich deep crimson; and Dora, a tea-coloured single.

The best front flowers were Leila Filkins, a rounded Jap of a silvery-lilac colour, petals reflexing, very smooth, and plenteous (A.M.); Madame Paolo Radaelli, Lord Ludlow, Ben Wells (good), F. S. Vallis, General Hutton (enormous and beautiful rich yellow flowers), Mrs. T. W. Pockett, W. R. Church, Ethel Fitzroy (orange-apricot centre), Mrs. E. Fulton (incurving white), Nellie Pockett, and, lastly, Mrs. E. Shirkell, of the Mrs. Pockett type, but coloured an intense canary-yellow (Silver-gilt Flora Medal).

Mr. H. J. Jones, Ryecroft, Lewisham, occupied a space 30 ft by 6 ft, and received a Silver-gilt Banksian Medal for a very tastefully-arranged collection of cut blooms. Tall vases were poised along the centre, and on either side beneath them were masses of the various varieties. The more noteworthy were Dorothy Pywett, a distinctive new Jap of large size, deep in build, with smooth broad petals that recurve, but have spoon-shaped incurving tips. It is of soft, palest creamy colour, bordering almost on white. There were also Geo. Lawrence, bronzy-red; Nellie Perkins; Countess of Arran, a long-petalled rose-mauve and white flower; C. Jarvis, of the Chas. Longley type, but bright amaranth coloured, and having narrower petals; Mrs. F. Hudson, a spotless white giant incurved, of great merit; General Hutton, good yellow; Miss Jessie Cottie, which furnishes an excellent decorative flower, of large size, and intense orange-apricot colour; H. J. Gillingham, a beautiful deep primrose-coloured incurving Jap (a yellow Western King); Viscountess Cranbourne, rich glowing yellow; and Wm. Higgs, an incurved of very rich colour. Miss Hetty Dean and many others were seen in Mr. Jones' group at their best.

Messrs. Cannell staged the following Chrysanthemums:



Mrs. E. G. Fairburn, a rich golden-bronze incurving Jap; Dr. Chisholm Ross (after E. Molyneux type); Madame Paolo Radaelli; Eldorado; La Fuson, white and lilac tinted; Lady Marcus Samuel; Mrs. E. Seward; Miss Muriel Tait; and Mrs. A. Jack, a large incurved lilac-purple. They received a Silver Banksian Medal.

## Botanic Gardens.

(Continued from page 425.)

The University Botanic Garden of Cambridge was founded in 1763, by Dr. Walker, Vice-Master of Trinity College. He gave the site, comprising nearly five acres, in trust to the chancellor, masters, and scholars of the University for the purpose of establishing a physic or botanic garden. Thomas Martyn, who was then professor of botany, was appointed reader on plants; and Charles, son of Philip Miller (who had aided Dr. Walker in selecting the ground) was appointed the first curator.

Previous to this date, probably the number of exotic plants cultivated in this country did not exceed 1,000 species, but during the eighteenth century about 5,000 new species were introduced. Professor Martyn died in 1825, and was succeeded in the chair of botany by Professor Henslow, who found the garden in a very neglected state, and utterly unsuited to the demands of modern science. Botany must have been at a very low ebb in those days, for Thomas Martyn held the professorship for sixty years. He was a very old man when he died, and, from age and infirmities, had long previous to his death ceased to lecture or even to reside in the University. There had been no lectures on botany for at least thirty years, although he deputed some able botanist to lecture in his stead; but the lectures, for some reason or other, were badly attended. Afterwards the late Sir James Edward Smith came forward to supply the deficiency, and applied for leave to give a course of lectures on botany. He had the consent of Professor Martyn and the then vice-chancellor, but there was such a strong opposition from the tutors of the colleges, on the ground of his being neither a member of the University or of the Church of England, that he was forced to withdraw; but I am glad to say that most of the masters and tutors of this University to-day are more broad-minded and tolerant than their predecessors. There was but little science (as we know it now) taught in those days.

It was a great pity that Sir James Smith was refused permission to lecture, as he was an eminent botanist; but—to return to our neglected garden. As Henslow found it, it was then in the heart of the town (the site of the present new museums in Downing Street); consequently, only a limited number of plants could be grown in the open ground, while the glass houses were too small and few in number, and he often reported its inefficiency to the governors, but it was many years before anything was done in the matter. An opportunity occurred in 1831 by which the University was enabled to purchase a more extensive piece of ground, consisting of about thirty acres, in the outskirts of the town, which is the present site of the garden. Many years elapsed, however, before the plants were removed from the old garden. Henslow was always advocating the enlargement and improvement of the garden, observing “that the larger the number of species cultivated in a botanic garden the greater will be the facilities afforded, not merely for systematic improvement, but for anatomical and other experimental researches essential to the progress of general physiology. It is impossible to predict what particular species may safely be dispensed with in such establishments without risking some loss of opportunity which that very species might have offered to a competent investigator at the exact moment he most needed it.”

Professor Henslow advised the appointment of a curator, who should be competent to meet the demands which such an establishment might require. He also visited the Royal Gardens, Kew, to get advice and information that should put this garden on a footing with those at Glasgow, Edinburgh, and Dublin. The result of all these labours on the part of Mr. Henslow was the appointment of the first curator of the new garden. The

place was given to Mr. Murray, a skilful gardener. Together they planned the garden, which has remained much the same ever since, except in a few minor details, such as the site of the new range of glass houses and a few new beds here and there. The first tree was planted in 1846 by Dr. Tatham, then vice-chancellor. The remainder of the trees, shrubs, and herbaceous plants were added as money allowed, the trees being planted to form a belt round the garden as much in their natural orders as possible. Mr. Stratton was the next curator to follow Murray, who did not live long after his appointment.

The first glass houses were constructed in 1855. These were, however, replaced by a splendid new range of houses in 1889-1890. There is a great deal one might say in a general way without going into details, but a few brief remarks must suffice before closing this subject. There is not another garden in the British Isles, or perhaps in the world, that is called upon to provide such a vast amount of material for the different lectures and research work as Cambridge, in addition to the keeping of a collection of plants, which in this country is rivalled only by the vast collection at Kew. We have been famous for our rare and interesting plants, many of which have flowered here for the first time in cultivation, and then figured. Then, again, we have been famous for collections of various groups of plants; for example, I would mention Insectivorous plants, Succulents, Crinums, Pæonies, Fuchsias, and Bamboos.

Many a so-called stove plant has been tried successfully on the sheltered borders of the plant houses. The rockery and bog garden have been the subject of much comment in the gardening press. Many years ago, before the present appreciation of Bamboos took hold of the public, there were some good specimens grouped naturally in sheltered positions near the pond. So well did they grow here that their culture was taken up with zest by the Kew authorities, where they are now well grown in a place specially constructed for them, known as the Bamboo Garden. Kew is rich in number of species, and has spared no expense and trouble to make the collection a success. No extra money or labour has been spent on them at Cambridge, and although we have a collection of over forty species and varieties, it is far surpassed by the Kew collection.

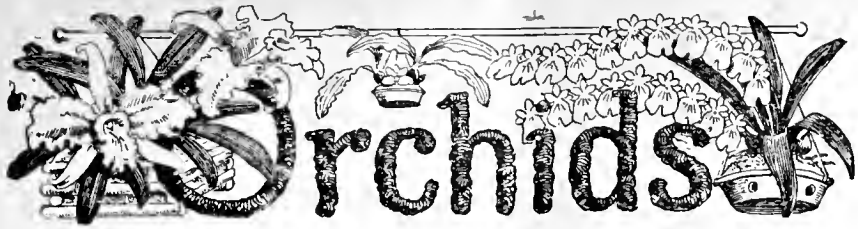
Our hardy succulents have created quite a sensation in the horticultural world, and some of them are still the finest examples of their kind in this country; but in these, as with the Bamboos, we shall have to bow to Kew and other places where space and money is less limited than here, but we are consoled by the knowledge of having set the example and shown what can be done.

Gerbera Jamesoni, or the “Transvaal Daisy,” first flowered here many years ago, and ever since it has been a great success. We distribute hundreds every year from seed ripened out of doors. A yellow-flowered variety was discovered at Barberton by the Curator of the Botanic Garden at Johannesburg whilst a fugitive in the Transvaal during the recent war. He collected a few seeds and sent them to the Curator of the gardens here. Young plants were raised which flowered in due course. Mr. R. I. Lynch very carefully examined and compared it with the type, and found that it was a variety only, not a distinct species. It is now known as Gerbera Jamesoni “Sir Michael,” in honour of Sir Michael Foster, whose services to horticulture and botany is well known. We hope to propagate and distribute this variety.—ALBERT HOSKING, Cambridge.

POSTSCRIPT.—I had believed that Gerbera Jamesoni was figured from here. I find, however, that this is not the case, and that the figure in “Bot. Mag.” in 1889 was made from a plant growing at Kew. Our plants having flowered at the same time, but whereas the Kew plants were lost, ours have succeeded and flowered every year, and plants have been sent to Kew from these gardens more than once.—A. H.

### The Vintage of 1902.

The nineteenth century's vintage records close with a Grape gathering throughout Europe phenomenally successful, both as to quality and quantity. The first vintage of the new century promised, up to a certain date, almost to rival the final one of the old, but in quality failed entirely to realise expectation, owing to adverse conditions of weather at the last. The 1901 wines, therefore, must, though not so very far behind 1900 in quantity, be classed as of a low order of merit.



### **Cypripedium Charlesworthi.**

In Captain Holford's magnificent collection of Orchids in the Drill Hall, Westminster, on Tuesday last, the *Cypripedium* which we herewith figure was noted as one of the loveliest of any. It is a fit compeer in a choice collection, along with the best forms of *Cypripedium* insigne. The large dorsal sepal, so beautifully rose-coloured, with the yellowish-brown pouch and white staminode, never fails to elicit praise from those who have seen it for the first time.

### **The Week's Cultural Notes.**

Many of the beautiful *Laelias* from Mexico are now either in flower or rapidly advancing. The flowering of these very useful Orchids forms the apex, if one may so term it, of the season's growth. After the flowers are past the plants rest until a new set of growths are produced, and, incidentally, it may not be out of place here to mention that the longer in season they are kept dormant after flowering the better, as the weather will be brighter, with more sunlight for them to produce their growth in.

Just now they will not require a great amount of water at the roots, but they must not be quite dried until the flowers are past and the pseudo-bulbs thoroughly mature. Should green or black fly appear on the flower spikes, pass a damp sponge over them with an upward motion. There is often a gummy exudation about the flowers, and the sponge will remove this as well as the insect. The pretty small species, such as *L. pumila* and *Dayana*, as they go out of flower must be hung up in the *Cattleya* house, but not too severely dried, as the small bulbs and sensitive leaves will not stand the strain.

The management of the temperature is just now a matter of anxiety to growers, the weather being so uncertain. A cold nipping wind one day is followed by damp, muggy conditions the next, and it is only by constant attention that anything like regularity can be maintained. A damp, warm atmosphere in most departments is quite wrong now, as it predisposes the plants to unseasonable growth, and often leads to damping. A fairly dry and buoyant one, on the other hand, does not distress them, but is sufficient to keep them at rest. Use as little fire heat as possible, but always have a little warmth on the pipes to keep the air moving.

For the guidance of the inexperienced, I may say that a suitable winter temperature will be in the warmest house 65deg by night and 70deg on dull days, rising, should the day be sunny, another 10deg, or even more, but not by fire heat. The *Cattleya* house may be kept at 55deg to 58deg by night, rising to 65deg by day, while 55deg by day and 60deg by night will do for the cool house. These figures need not be too rigidly adhered to. When the weather is very cold it is unwise to fire too freely, and it is far better to allow a slight drop than to dry up the plants with excessive fire heat.—H. R. R.

## **Cankered Apple Trees.**

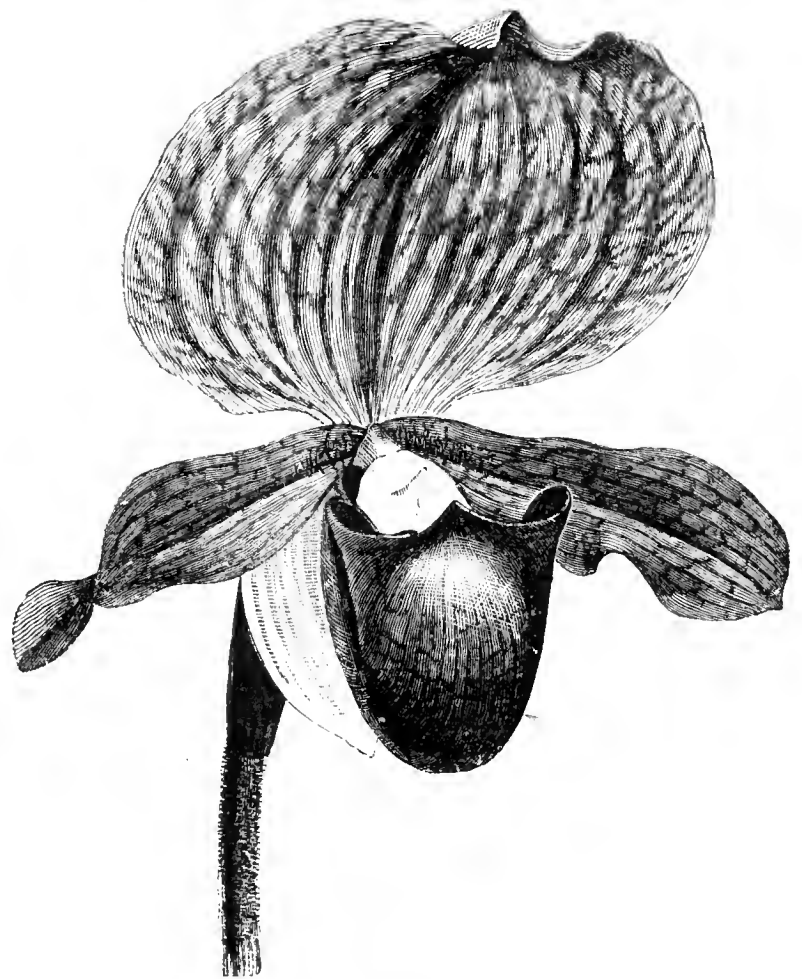
In reference to the above important question in your last issue by "Ignoramus," I should like to place my experience on record for the benefit of your correspondent and others who may care to read it. For a number of years I have taken a great interest in fruit growing on rather a large scale. Some fifteen years since I came in charge of a collection of Apple, Pear, and other fruit trees, all of which indicated bad planting. In most cases they were too deeply planted, in others the soil had not been prepared for the trees. The result was bad cases of canker (in the Apples), which always follows too deep planting. These trees had become too luxuriant, and in order to check their expansion the knife had been used freely, which, of course, aggravated the evil. Now for the remedy. First, I carefully pruned all these trees, using the knife very moderately, indeed, merely thinning the inside of the trees (pyramids and low bushes). I did not touch the leading shoots. I allowed these to grow on at will, and early in the autumn I opened a trench carefully all round each tree, beginning some 5ft from the stem, with forks, baring each large root as it was discovered. When all the roots had thus been found, and the true state of affairs had been ascertained, all the largest roots were cut through with a saw or sharp knife. A barrowful of turfy loam was added to the old soil, and as this was returned every root available was raised to as near the surface as possible. The soil was rammed very firmly with a wooden rammer, and a mulching of half-decayed manure

was placed round each tree. The leading shoots above referred to were shortened slightly, and the trees were left to take their chance till the following autumn.

I was told that these were extreme measures to take with such large trees, but all did well during the summer. Instead of shoots 8ft and 10ft in length being made, the leaders already mentioned were studded with fruit buds, as also every part of the trees. I had not yet, however, finished with these trees. The following autumn I decided to lift the whole lot bodily, which I did in this way. I opened trenches around each tree as before. I found the roots in quite a different state to that of twelve months previously. The new soil was a mass of fibrous roots, and formed into a solid ball, not unlike the root ball of a *Rhododendron*. I placed four builders' scaffold planks under these balls and a man on the end of each plank. Steadily, but surely and safely, the tree was hoisted up out of its old position; new soil was rammed underneath the ball, consequently the roots of the tree were brought about 18in nearer to the surface. An authority saw these trees some two years later, and pronounced them to be models of good cultivation. Not one atom of canker could be seen in any of the trees so treated.

There were, however, three or four trees which I did not consider worth the time and attention, and these were left. One still remains, a mass of canker. This is a "Transparent" Apple, and it certainly bears a crop of fairly good fruit every year; but when compared with its neighbours standing near to it, it compares very poorly indeed.

I do not say that feeding cankered Apple trees freely with



**Cypripedium Charlesworthi.**

liquid manure would not have good results, but lifting them, and afterwards feeding, would be infinitely better. First get the trees into a fruitful and healthy condition, and then feed freely; and for this there is nothing on earth better than farm-yard manurial liquid.

There is sometimes confusion with canker and a similar disease caused by woolly aphis, or American blight. This is very prevalent this season, and is causing a good deal of anxiety amongst gardeners. For the first time in my experience as a gardener I have seen a suspicion of it in the fruit trees there. Where it came from I do not know, unless it blew across the fields from adjoining property some 200 or 300 yards away.

I am convinced that there is nothing to compare with root-pruning and lifting for canker, and a solid foundation for the trees to rest on. The bottom of the holes should be rammed as firmly as possible. I am aware that fruit trees are, and must be, planted on thin soil, and then on such soil canker will quickly put in appearance. But we have a partial remedy by using the dwarfing stocks—the *Paradise* and the *Quince*. Both are surface rooting, and if these are liberally treated by way of surface dressings of good soil and liquid manure, worse use may be made of the soil, and little canker will be seen.

With regard to the application of liquid manure, it should always be given at some distance from the stem of the trees, that is, as far as the spread of branches.—J. E. A.



# NOTES & NOTICES

## Devon and Exeter Gardeners.

The meeting held in connection with the Devon and Exeter Gardeners' Association at the Guildhall, Exeter, on November 12 was well attended. Mr. T. Slade, gardener to the Right Hon. Lord Poltimore, read an excellent paper on "Table Decorations," which we hope to furnish notes of.

## Coronation Trees.

Trees to commemorate the King's Coronation have been planted at Edlington, Yorks. by the authorities; also in Victoria Park in the East of London; and at Musselburgh, in Midlothian. Twenty purple Beeches were planted by the King, the German Emperor, the Queen, the Prince and Princess of Wales, and other Royal members, at Sandringham on Monday, November 10.

## A Plan Drawing Competition.

The date for the sending-in of plans for a gardener's bothy (of which particulars were given on page 416, October 30) is drawing near, and we would particularly request young gardener-draughtsmen to give the matter their consideration, that a really useful plan may be put before our readers. Plans may be sent in now if completed.

## The Horticultural Hall.

The Council of the Royal Horticultural Society have issued in the form of a brochure the plans and statements for the erection of the new hall which is to commemorate the Centenary of the Society's existence. Owing to the Rose analysis and the crowd of Chrysanthemum show reports in our pages this week we are debarred from publishing the plans as accepted by the Council, but we trust to be able to do so next week. There are many imposing features, but an improvement could be effected in the roof, which detracts from the nobility of the front elevation by its resemblance to that of a board school.

## Bowls in Liverpool Parks.

It is interesting to note that the Parks and Gardens Committee of the Liverpool Corporation, after hearing a most favourable report from the esteemed superintendent, Mr. Herbert, have decided to spend some £60 on the purchase of bowls, owing to the highly successful season which has just passed. This is a step in the right direction, as the old game has very many devotees in the district, who are now petitioning the Council to lay down more sward for the benefit of those who cannot enter into the more vigorous outdoor pursuits. A small charge is made, and by this means the ratepayers are relieved of heavy taxation. It is an object worthy of extension if one must judge the zest of the competitors as a criterion.—R. P. R.

## The Loss at the York Gala.

Under the presidency of Alderman Sir C. Milward, a meeting of the council of the Grand Yorkshire Gala was held at Harker's Hotel last week. The balance sheet showed that there was a loss on last June's gala of £634 8s. 4d., due to the inclement weather which prevailed at the time. This is the greatest loss which the society has ever sustained. The next business was the appointment of a secretary in succession to Mr. C. W. Simmons, who retired on the ground of pressure of other business, and Mr. Fred Arey, of 3, New Street, was elected to that position. In recognition of the services of Mr. Simmons during the fourteen years he was secretary, the council elected him a life member. Votes of thanks were accorded the ex-Lord Mayor, president for the past year; to Sir C. A. Milward, chairman of committee; Alderman Border, vice-chairman; Alderman Sir J. S. Rymer, treasurer; to Messrs. Harper (N.E.R.); and to Messrs. Baekhouse, Webb, and Suttons for donations. It may be stated that, notwithstanding the loss of the last gala, the society have still a substantial balance in hand. With regard to next year's fixture, a committee was appointed to arrange dates. A vote of thanks to the chairman concluded the proceedings.

## Irrigation in America.

In Texas and Louisiana there are now more than one hundred canals and pumping stations, each capable of flooding one thousand acres of rice. These are owned by irrigation companies, which supply the water as needed to the rice farmers.

## The Automobile Lawn Mower.

An illustration of one of the above inventions appears in "American Gardening" for October 25. This machine has been in use on the lawns of Mr. P. A. B. Widener, Ogontz, Pennsylvania, and have greatly assisted the turf, heavy rollers being attached to the machine.

## Gardeners' Library at Pymmes Park, Edmonton.

In connection with the Middlesex County Council School of Gardening, a garden library has been established at Pymmes Park, Edmonton. The library is open for the benefit of gardeners in the neighbourhood on Tuesday and Thursday evenings from 7.30 to 9.30, and on Wednesday mornings from 10.30 to 1. A good selection of the best books on gardening and botany has already been made, and others will be added from time to time. Applications to use the library may be made to Mr. J. Weathers, County Instructor in Horticulture, Pymmes Park, Edmonton.

## Devonshire the Beautiful.

Devonshire in particular is exceedingly beautiful at the present time. The Oak and Beech woods, which are so very plentiful, are resplendent in many shades of bronze, russet, gold, and crimson, while beneath the trees the ground over many acres is likewise strewn in colours of the richest tones. At Exmouth on Monday morning the sun shone as in mid-May, and the black-birds sang voluptuously. Berberis Darwinii was noticed in flower, in company with Jasminum nudiflorum and Passiflora cærulea, each in the open air. Happy Devonshire! for indeed she is endowed with plenteousness. While Shetland is cutting a green harvest, the southern county has Wheat fields with growths 4in high.

## Bristol and District Gardeners' Mutual Improvement Assoc.

This association held its usual meeting at St. John's Rooms, Redland, on Thursday evening last, Mr. E. Poole, F.R.H.S., presiding over a good attendance. The lecturer for the evening was Mr. E. Binfield, gardener to Mr. Francis Taggart, J.P., F.L.S., Old Sneyd Park, his subject being "Stove and Greenhouse Ferns." The members having looked forward to this lecture, were not disappointed, for the masterly way in which Mr. Binfield handled his subject proved conclusively that he had made a careful study of these most useful plants, his lecture being brim full of useful and practical information. He dealt minutely with the general treatment of the leading varieties, including propagation, potting, watering, insect pests, and numerous other items required for successful cultivation. Mr. Binfield remarked on the indispensable uses of Ferns. Cut flowers, groups of plants, &c., were incomplete without them. He strongly advised his audience to follow as much as possible Nature's own instructions, which can always be relied on. The Maidenhair varieties being the most popular, Mr. Binfield gave many excellent hints concerning the requirements of these favourites. He recommended watering with soft water which was the same temperature as the house. Shading was necessary for their well-being, if not carried to excess. He gave a complete list of the best varieties for different purposes. To eradicate insect pests, Mr. Binfield argued that the XL All fumigator was undoubtedly the best. His lecture was much appreciated, as was shown by the excellent discussion which followed, and Mr. Binfield was accorded the heartiest thanks of the meeting for the evening's enjoyment. Prizes for six sprays Chrysanthemums were awarded as follows: first, Col. Goss (gardener, Mr. Shaddick); second, Mrs. Coleman (gardener, Mr. Spry). Certificates of merit went to Lady Cave (gardener, Mr. E. Poole) for a fine collection of vegetables; to Mills Baker, Esq. (gardener, Mr. Board), for a Cypripedium; and to Gilbert Howes, Esq. (gardener, Mr. White), for two Ferns; the judges recommending a special certificate of merit for W. A. F. Powell Esq. (gardener, Mr. Raikes), for five excellent Chrysanthemums. On November 27 Mr. Harding, of Clifton, is announced to lecture on "Fungus," which will, no doubt, be an interesting one.—H. K.

**Gardeners' Royal Benevolent Institution.**

A grand concert in aid of the above institution has been arranged to be held in the Constitutional Hall, Chertsey, on Thursday, November 27. Tickets and programmes, or any information relating to the concert may be obtained of the local secretary, Mr. A. J. Brown, F.R.H.S., Jessamine Cottage, Chertsey.

**Royal Meteorological Society.**

At the ordinary meeting of the above society, held at the Institution of Civil Engineers, Great George Street, Westminster, S.W., on Wednesday, the 19th inst., at 7.30 p.m., the following papers were then read:—"English Climatology, 1881-1900," by F. Campbell Bayard, F.R.Met.Soc.; "The Rainfall of Dominica," by C. V. Bellamy, M.Inst.C.E., F.R.Met.Soc.—W. M.

**Pictorial Practical Rose Growing.**

This is the latest of Messrs. Cassell and Co.'s illustrated shilling gardening books, which are being produced under the editorship of Mr. Walter P. Wright. The subject-matter of the booklet is well conceived and admirably illustrated, special varieties like Maréchal Niel and Gloire de Dijon and others receiving special notice. Diseases and pests are briefly referred to, and useful varietal lists of Roses are included.

**Fixtures for 1903.**

The following dates have been fixed by the Royal Horticultural Society for 1903, subject to possible alteration: January 13, January 27, February 10, February 24, March 10, March 24 (Hyacinth and Tulip Show), April 7, April 21 (Primula and Auricula Society), May 19 (British Tulip Show and Conference), May 26, 27, and 28 (Temple Flower Show), June 9, June 25 and 26 (Holland House Show), July 7, July 25 (National Carnation Show), August 4, August 18, September 1 and 2 (National Dahlia Show), September 15, September 29 and 30 and October 1 (Fruit and Vegetable Show and Conference at Chiswick), October 13, October 27, November 10, November 24, December 15; 1904—January 12, January 26, February 9.

**Cardiff Gardeners Association.**

The third meeting of the session took place on Tuesday, November 11, at the Grand Hotel, Mr. C. E. Collier in the chair. Mr. H. Harris, gardener, Wenvol Castle, Glamorgan, delivered a lecture entitled "The Flower Garden." In doing so many of the old favourite species were mentioned, and suggestions introduced as to the best ways and means of planting and arranging to produce the best effects, either in beds or herbaceous borders. The lecture throughout was of an appreciable character, and the discussion was enthusiastically taken up by a large number of members present. Mr. Harris staged a fine stand of six blooms of Chrysanthemum Mrs. J. Lewis, and was awarded a first class certificate; also a hearty vote of thanks for his lecture, which brought the proceedings to a close—J. J.

**Newport (Monmouth) Gardeners' Mutual Improvement Assoc.**

On Wednesday, November 12, the members of the above association held their usual meeting, when Mr. Wiggins gave an interesting paper on "The Reproduction of Ferns." Mr. Wiggins, in his opening remarks, gave statistics showing the estimated number of varieties of Ferns at present known, also describing wherein Ferns differed in growth from other plants; then proceeded to point out the manner of germination and fertilisation. It was a very interesting and instructive paper, and was much enjoyed by those present. A good discussion followed, which was taken part in by Messrs. Harris, Powell, Sharratt, Reece, Kenward, and the chairman. A hearty vote of thanks was accorded Mr. Wiggins for his paper. A fine display of plants and thirty-six dishes of Apples and Pears was placed on the tables by Mr. Powell, gardener to Col. C. T. Wallis, president of the association, and the society's certificate of merit was awarded. A vote of thanks was accorded Mr. Sharratt for a well-flowered plant of *Cattleya labiata*. Mr. Daniels presided. On Thursday evening, by the kind invitation of F. Phillips, Esq., a vice-president of the association, the members visited Nant Coch to view the grand display of Chrysanthemums. A most excellent supper was provided and a most enjoyable evening was spent.

**Southampton Chrysanthemum Show.**

We are in receipt of some very excellent photographs of the choicest blooms at the recent show held in Southampton, and these will be furnished in the next issue of the Journal.

**The Late Mons. E. M. F. L. Rodigas.**

We regret to record the death of the above-named gentleman, lately honorary director of the Horticultural School de l'Etat, and honorary member de la Chambre Syndicate des Horticulteurs Belges, Gand. His funeral took place on the 17th inst.

**Northern Notes.**

Dundee is one of the most advanced centres of horticultural activity in Scotland. On November 5, Mr. A. D. Richardson, late of Edinburgh Botanic Garden, gave a lecture in the Grove Academy, Broughty Ferry, on "Hothouse Buildings," being one of a series of horticultural lectures to be delivered. \* \* On November 6, Dr. John H. Wilson, lecturer on Agriculture and Rural Economy in St. Andrews University, delivered a lecture at Forfar entitled, "Personal Experiences as a Hybridist," under the auspices of the Forfar Horticultural Improvement Association. These lectures were well attended.

**National Fruit Growers' Federation.**

A meeting of the National Fruit Growers' Federation took place at the Westminster Palace Hotel on Tuesday (C. W. Long, M.P., presided) to form an advisory committee to consult with a council of railway managers in connection with the deputation that took place recently for the purpose of adjusting the differences between grower and carrier. It was suggested an important public meeting should be held in each county early in December, and invite all growers and others interested with the cultivation of fruit to attend, for the purpose of enrolling new members and ascertain the reforms required for each separate county.

**Reading and District Gardeners' Mutual Improvement Assoc.**

At the last fortnightly meeting of the above association, which was largely attended, and presided over by Mr. F. Lever, the subject for discussion was Japanese Chrysanthemums for exhibition and their culture, and was introduced by a well-known local exhibitor, Mr. D. Ager, gardener to Mr. Milton Bode, Caversham. The subject was dealt with in a very practical manner, and the various details of culture were followed with the closest attention, and a lively discussion was the result, in which the following members joined:—Messrs. Ager, jun., Judd, Hinton, Exler, House, Powell, Herridge, Basil, D. Dore, Neve, Cretchley, Burfitt, and the chairman. The exhibits were very interesting, viz., Honorary, a fine group of *Celosia pyramidalis plumosa* (Mr. W. Townsend, The Gardens, Sandhurst Lodge); a very pretty lot of *Nerine flexuosa* (Mr. G. Hinton, The Gardens, Walmer; and for certificate a group of well-grown *Cyclamens* (Mr. G. Attwood, Cruchfield House, Bracknell); seedling Chrysanthemums (Mr. House, The Gardens, Oakfield). The certificate was awarded in both cases.

**A State Forest Wanted.**

Colonel Bailey, in opening for the session the forestry class in Edinburgh University recently, spoke of the disadvantages under which forestry students worked in Edinburgh as compared with those in foreign countries. He said that on the Continent they had fully equipped schools with woods in which practical instruction was given, and the student's whole time, for three or four years, was practically at the disposal of the professors. Here they were limited to a course of one hundred meetings, and the students were for the most part engaged in other university work, while they had to be content with the excursions on Saturdays to woods in the neighbourhood, which had not been managed on correct principles for a sufficiently long time to render them suitable object-lessons to the class. The want of a State demonstration forest was very badly felt, for woods privately owned could never answer the purpose satisfactorily. In consequence of representations made by the Arboricultural Society, a Departmental Committee has been appointed by the Board of Agriculture; and it might be hoped that one result of that Committee would be the provision, within a convenient distance of Edinburgh, of a State area in which practical instruction could be given to the class.





### The Winter Moth.

Having observed several near a Pear tree, I placed a grease band on it, and caught twice as many moths—male and female—as I got on any Apple tree. The question arises: Does the winter moth do any injury to the foliage and fruit of Pear trees? If not, why do they frequent them? and if it is usual for them to do so, would it not be desirable to grease-band Pears as well as Apples? No one in England or elsewhere thinks it worth while to do so. One male carried a female safely over the grease band into the tree.—C. C. ELLISON, Bracebridge, Lincoln.

### Coral Spot Disease on Shrubs and Trees.

Of late years the bright, coral-like warts, about the size of a millet seed, have been conspicuous on the surface of dead branches, and even on the stems of trees, and this autumn (October 27) are plentiful on the Lime, Horse Chestnut, Sycamore, and Maple, and more especially on the Red Currant. The outgrowths are very beautiful, noticeable at some distance, and it must also be said very serious in consequences. The small bead-like and bright red studs accord with tissue that has been destroyed by the mycelium of the fungus named *Nectria cinnabarina*, of which the numerous bright, coral-like outgrowths are the conidial condition. The conidia, or spores, are very minute and produced in vast numbers. In the late autumn or early winter these warts assume a darker red colour, and become minutely warted, due to the formation of the ascigerous form of fruit. In this form the fungus passes the winter, and in the spring the spores produced in asci are liberated. The mycelium is also perennial in the tissues, as the disease spreads from the base or centre of infection, and sometimes kills the branch affected, or even the whole tree or bush, as in the case of the White Lime (*Tilia argentea*) and Red Currant (*Ribes rubrum*), that have been particularly noted.

The fungus is generally a saprophyte, living on green cut-off branches or stems, the fungus not presenting signs of infection until the following autumn, when the surface of the bark is studded with the bright, coral-like warts. On living trees it is a wound parasite, the spores or conidia germinating on the surface of the wound, and the mycelium passes into the living tissues, penetrating between the inner bark and outer wood, destroying the cambial layer, and also killing the bark. The portion of killed branch or stem in the autumn following attack is bedecked with the bright coloured fruit of the fungus.

**PREVENTION AND REMEDY.**—As infection takes place by a wound, dressing the cuts made in pruning, whether lopping off branches of trees by saw or cutting off twigs of shrubs with a knife, with a prophylactic substance is imperative to avoid attack. For this purpose Stockholm tar thinned with paraffin oil to the consistency of paint, thus readily applicable with a clean, half-worn paint brush, answers admirably, applying to the wounds only, and shortly after they have been made. On the large branch wounds of trees gas tar may be used, in each case brushing well into the cut tissues, so as to form a protective coat over them, not leaving any part of the wound uncoated.

Diseased branches should be cut off to some little distance below the appearance of the bright-coloured fruit, burning the diseased branches, though there is no danger of infection from cut-off or dead branches lying on the ground, always providing that infection cannot take place through the wounds on the trees or shrubs, they being duly safeguarded by a prophylactic dressing. The fungus is very common on one-year cut Pea sticks and stakes, therefore to destroy these by burning is both desirable and even necessary.

In the case of infection on a stem the bark should be cut through into the living tissues, and the diseased entirely removed, burning this removed portion; then dress the wound with the composition of Stockholm tar and paraffin oil or gas tar. As the mycelium spreads somewhat beyond the point where it indicates its presence externally, the incision through the bark should be made well into the living tissues, then a circumferential boundary of sound bark and wood will be secured, and the wound thus made needs only protection from attack outwardly, and new bark will in due course be formed around the wound, and in due time cover it entirely.—G. ABBEY.

### Illegal Showing.

Now that all the gardening papers are full of reports of the different shows that have taken place all over the country, one often wonders, when reading the prize list, and more so when walking round admiring the different exhibits, if all are grown by the exhibitor, as there is so much borrowing at show time. One grower knows where he can get far better blooms than his own. I heard an exhibitor say last year that he had that morning sold two dozen blooms for exhibition, which was not much to his credit. Again, take the fruit and vegetable classes. One man I know scours the country before fruit-gathering time picking up a good dish here and another one there, and then at the shows prize cards are fixed to them as grown by him. Another has a friend living down south, who sends him an extra good dish or two. Then, again, take vegetable collections. One often sees some variety of which you know the exhibitor has none. I think the time has come when all such practices should be put a stop to. No doubt, the readers in the Journal will say: How is it to be done? Surely some way could be found to stop what I call illegal showing. I am sure any lady or gentleman would stop their gardener from showing anything but what was grown in their garden. It is, however, the man that is his own master who makes a business of showing that would be the most difficult to stop.—A YORKSHIRE GROWER.

### Pruning Fruit Trees at Planting.

I am sorry your correspondent "Observer" has misunderstood my article on the above subject. He quotes two sentences detached from different parts of the article, which certainly appear contradictory on a first reading. The first, however, deals with the comparative results of pruning at planting time and leaving the trees unpruned—that is, allowing the whole of the previous season's growth to form a part of the future tree; while the second deals with the results of deferring the pruning of a tree till after a season's growth, and then cutting back some of the wood which was on the tree at the time of purchase. Surely these two sentences cannot be contradictory. In case my meaning may have been obscure to others as well as to your correspondent, perhaps I may be allowed to repeat the gist of my contention, namely, that the non-pruning of newly planted trees leads to weak growth with the bearing of fruit before the branches are strong enough to support it, whilst the immediate cutting back of the young wood at planting time strengthens the growth, whilst encouraging, in most sorts of fruit trees, the formation of fruit spurs. When pruning is deferred till after a season's growth, and then that growth, with that of a part of the previous season, is removed, the vigour of the tree is undoubtedly increased; but time is lost, while the tree in the meantime, at any rate with dwarf trees, may become too strong. Thanking you, sir, for allowing me this opportunity of explaining my meaning.—A. PETTS, Chelmsford.

### Do Plants Grow at Night?

From my earliest associations with plants this question, to a certain extent, exercised my attention. I have little doubt the same thing has occurred in the experience of many others similarly situated. Gardeners, farmers, and foresters are all brought in daily contact with plant life, and it is scarcely possible that any one of them could pass a lifetime in its presence without being impressed with the question whether or not does the plant cease from labour during the night, like all the rest of animated Nature, and participate in that divine repose so essential for the welfare of animal existence. Either of the above mentioned professional gentlemen will almost off-handed tell one that the evidences are favourable to the supposition of night growth. Some of them, indeed, will go to the length of saying that it is during that time plant architecture is apparently most active.

And it must be granted that the apparent evidences are somewhat conclusive in character. Young Vine shoots, and many other softwooded plants, give strong indications of night growth between the time that the gardener leaves off duty in the evening and his return in the early morning, so that little wonder need be entertained at the opinions vouched by the evidence of the person's eyes. All careful observers have experienced the same state of things, but, like other apparently real things, some always exist to doubt the very evidence of their eyes, unless such can be philosophically substantiated. There is, therefore, no wonder to find that some exist, of which the writer is one, who cannot throw in their lot with those who believe that plants grow in the night. Without entering into the chemical processes which take place in the plant economy, and which, upon the whole, are unfavourable to the idea of growth during the partial suspension of solar energy, there is sufficient corroborative evidence in the fact that the sun is the source of life to reasonably repel the stoutest asseverations of those who maintain contrary views.—E. C. CHISHOLM.

Theoretically, the plant must lose energy in proportion to the absence and distance of the sun's influence, and loss of energy tends to repose and inactivity. It is, therefore, more than probable there is a period in the night—however small—when the vitality of the plant succumbs to the soporific anodyne so providentially furnished by Nature. Under such circumstances there can be no growth, the process being necessarily suspended, and the available energy being required alone to keep in motion the pulse of life. The process of cellular construction, which must of a necessity command the highest combined influence and energies of sun and plant in the operation, is doubtless inactive till once more the power of the sun returns to renew the loss of energy, when the great army of phytozoons mount again the scaffolding to perform the duties of the day.

We are all familiar with the well-known phrase, "the dead of night." The appellation carries with it a greater significance than, perhaps, is ever assigned to it, for at that particular time is Nature not dead? True, in the summer months, when the withdrawal of the sun's influence is so little felt, scarce any appreciable diminution in growth can be detected, for, in point of fact, the essential influence is to all intents and purposes continuous. Therefore, during the few hours which the sun's disc is below the horizon it is very probable that its influence operates in a similar way to which it does in the case of plant life when developed in a cellar. But in the case of day and night of equal duration, or in that of the period of winter, the sun's influence is much lessened and the period of rest in proportion increased.

Were such unduly protracted, there is every reason to think that plant and animal life would cease to exist, for what is this sleep and rest which supervenes—the disappearance of the life-giving power of the sun, but a loss of vital energy corresponding to the duration of the absence of that power? And if we conceive the possibility of a midsummer night being protracted to the duration of a midwinter night, the probable effects would be disastrous, and, similarly, the same direful effects would supervene the extension of the winter season into the summer. The diurnal, or, rather, the nocturnal period in which the plants rest, is a prefigure of that greater rest which Nature prepares for it in the winter months. With the decrease of the sun's power begins the symptoms of loss of vital power in the plant. The leaf changes colour, it withers, and falls. The sap itself is congealed into wood, and at length, when all is finished, the plant falls over into a long and profound sleep.—ATLAS.

## Leading Commercial Rosarians.

### Mr. Geo. Dickson, Sen.

Mr. George Dickson is the eldest son of Alexander Dickson, who founded in 1836 the very flourishing nursery business of Messrs. Alexander Dickson and Sons, Limited, Newtownards, Co. Down, Ireland, and was born on July 7, 1832. He is now chairman of the company, and from the death of his father, in 1880, until 1900, traded as Alexander Dickson and Sons. For family reasons, he converted the business into a private limited company on the latter date, the shares being all held within the family.

Mr. Geo. Dickson has always been closely identified with Florists' Flowers, particularly Gladioli, Dahlias, and Pansies, more especially in his earlier years, when he raised many fine varieties, and was a successful exhibitor at the leading Irish and Scottish shows. It is almost fifty years since he gave his attention to Roses, making a speciality of them. It was from him that his sons, George and Alexander, received instruction in hybridising, which has enabled them to produce the large numbers of seedling Roses that are now grown in all parts of the world, and to whose merit the present analysis bears record.

In latter years the management of the business has been largely left in the hands of his four sons, while Mr. Geo. Dickson, sen., gives much of his time to the breeding of Shorthorns, of which he possesses an excellent herd.

He is a magistrate for Co. Down, member of the Down County Council, sitting for the Newtownards and Mount Stewart Division since the passing of the Local Government Bill for Ireland, Chairman of the Board of Guardians, and Chairman of the Technical Instruction and Agricultural Committee of the Down County Council, where his large experience is much appreciated.

At present at Newtownards upwards of two acres is devoted to the growth and testing of seedling Roses. Last year the firm budded from upwards of 2,000 seedling plants that had germinated during the spring of 1902. All seed is sown in pots, and the parentage of each correctly noted and preserved. All through the flowering season the head of the firm spends much of his time daily going in and out the various quarters, making notes of the results.

### Mr. B. E. Cant.

The memory of the late Benjamin R. Cant is revered by all of those steadfast rosarians who were contemporaries with him. He died untimely, but left a first-class business in the hands of two very capable sons. The firm trades under the name of Messrs. B. R. Cant and Sons, the Old Rose Gardens, Colchester. Mr. B. E. Cant principally supervises the cultural work of nursery-gardening, and during the exhibiting period he is to be seen one day here, another day there, with collections of Roses. Not a little of the success achieved by the firm in this connection is due to his excellent judgment, care, and coolness in setting up large numbers of flowers in a short time.

Mr. B. E. Cant has of late years devoted a good deal of time and consideration to the hybridising and crossing of Roses. His efforts in this direction are also crowned with good results, for at the exhibition held at Richmond on June 26, 1901, his firm secured a Gold Medal for a new Hybrid Perpetual Rose, named Ben Cant—a variety of splendid form, substance, and crimson colour; and again on July 4, 1901, at the N.R.S. Temple Show, a Gold Medal for the new seedling Tea, Mrs. B. R. Cant.

Many promising seedlings were seen at the Old Rose Gardens last summer, and one has every reason to predict a future of distinction for Mr. B. E. Cant as a raiser as well as exhibitor. He states in a letter to us that his great object is to secure hardiness and great vigour of growth in his seedlings.

### Mr. Hugh Dickson.

Mr. Hugh Dickson, of the Royal Nurseries, Belfast, has been connected with Rose growing since his earliest years, and served his apprenticeship in Edinburgh in the famous nurseries of Messrs. Lawson and Son, who were then amongst the leading Rose growers in Britain. Mr. Dickson returned to Belfast in the early fifties, and brought with him a choice collection of the finest Roses known at that date, also a number of Manetti stocks (the first introduced into Ireland), and thus became a pioneer in Irish Rose growing.

Mr. Hugh Dickson has been a leading exhibitor throughout Scotland and Ireland for the past forty years, and his success, which has continued so uninterrupted for so long a period, has made his name a household word among Rose growers in these countries. His recent successes in England, particularly under the National Rose Society in London, and the provinces, has also brought his name prominently before the Rose-growing public in England. His good fortune at English and Scottish shows is all the more meritorious considering the great distances the blooms have to travel. Mr. Hugh Dickson's nurseries are situated at Belmont, on the most beautiful suburbs of Belfast, and are amongst the most up-to-date in the country. Roses are, of course, the leading feature, and about 200,000 are grown and distributed annually. Coniferæ are also a leading feature of the nurseries, as well as ornamental trees and shrubs, which do admirably at Belmont, the climate of Ireland suiting them. The trees are all splendid in health and colour. The general nursery stock is large and well grown, covering about forty statute acres.

### Mr. J. Harkness.

The business of Messrs. Harkness and Sons, Rose growers, Bedale, Yorks, of which Mr. J. Harkness is the leading member, was founded in 1880, in connection with Mr. R. Harkness, who now successfully carries on a separate business at Hitchin, in Herts. Mr. J. Harkness has taken the keenest interest in all hardy flowers, and Roses especially, for over thirty years, during which period he has also been a noted exhibitor.

The late Queen's Jubilee year (1887) brought the firm of Harkness and Sons their first great success in Roses, for they then won both the National Rose Society's trophies and every class for seventy-two distinct varieties in which they contested during the Rose season of that year. In the years 1887, 1889, 1893, 1895, 1897, and 1901 the N.R.S. trophy was awarded to their flowers, and in 1887, 1888, 1889, 1890, 1893, 1895, 1896, 1898, and 1900 the N.R.S. Jubilee trophy was captured by the Bedale blooms, making fifteen successes in (open) trophy classes from 1887 to 1901.

On three occasions the firm was unable to compete through the lateness of the season, and were second (twice beaten by one point) several times. The past season being a phenomenally late one, especially for firms northward, the Messrs. Harkness and Sons were unable to cut exhibition flowers till well on in August. The firm's record in competitions with hardy herbaceous flowers is equally creditable, and is a silent testimony to the care and cultural attention bestowed on the stock at Bedale, where twenty-two acres are under use.

An interesting fact in connection with their exhibiting of Roses is that the start was made after reading a hint given in "The Rosarians' Year Book," edited by the Rev. H. H. D'Ombrian, to this effect: "that if any nurseryman planted 5,000 Roses solely for exhibition, he would be almost certain to win the championship." Mr. J. Harkness took the hint, with the results indicated in the foregoing lines.





ARTHUR W. PAUL, Waltham Cross.

**Mr. Arthur William Paul.**

Mr. Arthur William Paul has been associated with his father, Mr. William Paul, F.L.S., V.M.H., for the past twenty-five years in the conduct of the Royal Nurseries at Waltham Cross. Whilst thoroughly conversant with hardy trees and shrubs, fruit trees, and the other specialities of a hardy-plant nursery, and closely occupied with the management of a large and increasing general nursery business, Mr. A. W. Paul has devoted especial attention to Roses, for which the Waltham Cross Nurseries have always been famed. Some few years since he recognized that the limits of the public taste in that flower appeared to have been reached in regard to excessive size and regularity of bloom, as manifested at the exhibitions, he turned his attention to its development as a decorative flower for the garden, with the result that a large number of varieties, remarkable for their freedom and continuity of blooming and exquisite tints of colour, and whose names have now become household words to the horticulturist, have been either raised at Waltham Cross or introduced to public notice from these nurseries. The early exhibits of these varieties in masses of a kind by Messrs. Wm. Paul and Son were the precursors of the present classes for garden Roses, which are now so popular at all leading Rose exhibitions, and amongst the most attractive sorts may be mentioned *Coralina*, *Enchantress*, *Queen Mab*, *Sulphurea*, and others raised at Waltham Cross and *Papa Gontier*, *G. Nabonmand*, *General Schablikine*, *Grand Duc de Luxembourg*, *Gross an Teplitz*, which Mr. A. W. Paul was the means of introducing through his firm to general notice in this country from the Continent, where he was among the first to recognise their merits. Some valuable climbing Roses have also been raised and introduced from Waltham Cross during the same period, notably the *Waltham Climbers*, *Waltham Rambler*, *Climbing Belle Siebrecht*, and the new *Field Marshal*, lately figured in these columns, which was greatly admired whenever exhibited last season.

Mr. A. W. Paul is especially identified with the Rose as an autumn flower, and his lecture on this special phase of Rose culture at the Royal Horticultural Society's meeting in September last year was very favourably received.

**Mr. George Cooling.**

Mr. George Cooling is head of the firm of Messrs. Cooling & Sons, seed merchants and nurserymen, Bath, and has done great service in popularising the garden Roses, and thirty years ago he secured and catalogued varieties which were then almost lost. His firm exhibit collections of the best garden Roses at all the leading Rose shows during the season, and with very notable success. Mr. Geo. Cooling and his sons have given considerable attention to Hybrid Bourbons. In 1898 they gained the N.R.S.'s gold medal for Purity (H.B.) at the Crystal Palace Show.

**Mr. Arthur Turner.**

Mr. Arthur Turner (whose portrait appears) and his brother, Mr. Harry Turner, together manage the business known under the name of Charles Turner, The Royal Nurseries, Slough. Mr. Charles Turner, the father of Mr. Arthur and Mr. Harry, established these nursery grounds over fifty years ago, and "Turner's, of Slough," has had a notable distinction during all that period. The famous Turner's Crimson Rambler was sent out from here, and the history of that Rose was given in the *Journal of Horticulture* for July 25th. 1901. It has been one of the parents of a number of the splendid new Ramblers that have been certificated within a recent date. The firm of Mr. Charles Turner has cultivated Roses to a very large extent for the past forty years, both indoors and out, and their specimen pot Roses at the Temple Shows and other leading horticultural exhibitions have been excelled on very rare occasions.

**Mr. Frank Cant.**

Mr. Frank Cant, of the Braiswick Rose Gardens, Colechester, is one of our best known rosarians. He is one of the oldest members of the Executive and General Committees of the N.R.S., and as an exhibitor of early and late Roses he has gained a high-standing reputation. It was Mr. Frank Cant who first exhibited those fine exhibition blooms in boxes at the Royal Horticultural Society's shows at the March meetings some twelve years ago. He captured the champion trophy of the N.R.S. at the Crystal Palace in 1883 (his second attempt), and won it again in 1890, 1892, and 1894, and this memorable Coronation Year he has carried off quite a large number of medals, cups, and trophies—notably at Holland House, the Temple Gardens N.R.S. Show, where he not only won the champion trophy for the seventy-two exhibition Roses, but also the first prize in the largest class for garden Roses (thirty-six bunches). The same day he won the Gunnersbury Challenge Cup at Richmond.

Of new Roses, Mr. Cant has given us three—Mrs. Frank Cant, a delightful pink in colour, strong growing, free blooming, and exhibited by him in almost every winning stand; Muriel, a charming salmon pink, which will be heard of more in the future; and Lady Roberts, a delightful new Tea Rose; seen even so late as October 7, when he completed his exhibiting for this year by staging decorative Roses, for which he was rewarded by a gold medal of the R.H.S.

Mr. F. Cant has two sons, one of whom will shortly come into the business.



GEO. COOLING, Bath.



GEO. DICKSON, Newtownards.



ARTHUR TURNER, Slough.



FRANK CANT (Frank Cant & Co.).



J. HARKNESS, Bedale.



B. E. CANT (B. R. Cant & Sons).



HUGH DICKSON, Belfast.



## Societies.

### Royal Horticultural Society, Drill Hall, Nov. 18th.

Captain Holford's Orchid collection was the cynosure of Tuesday's meeting, and both Messrs. Wells and Co. and H. J. Jones had charming groups of Chrysanthemums, which we refer to on page 467. Veitch's Begonias, too, were exceedingly brilliant. A number of very excellent hybrid Orchids were certificated, and the finest subject under the Floral Committee's notice was *Jacobinia chrysostephana*.

At the afternoon meeting Mr. Cecil H. Hooper gave a lecture on "Spraying Fruit Trees and Packing Apples, as Practised in Canada." The attendance of visitors was very satisfactory, though the day was bitterly cold.

#### Floral Committee.

Messrs. Hill and Son, Barrowfield Nurseries, Lower Edmonston, contributed a collection of Platyceriums, including the grey-felted Veitchi, the lacinated and drooping Willincki, and also Grande, a perfect stag's-horn specimen. A dozen species were on view, and many of them were models of the very best culture.

Messrs. Cannell and Sons, Swanley, staged over a dozen massive specimens of *Begonia Gloire de Lorraine* and *Turnford Hall*, the latter almost as large. The plants were over 2ft high, and almost the same through, being smothered with richly coloured flowers.

A whole table was filled with Begonias from Messrs. J. Veitch and Sons, Limited, Chelsea, S.W., including *Agatha*, a dwarf form, closely resembling *Gloire de Lorraine*; and the following "winter flowering" sorts: *Winter Perfection*, a bright cerise-pink; *Ensign*, glowing carmine; *Mrs. Heal*, a true single, with large crimson-scarlet flowers; *Julius*, the deep rose-pink *Balsam-flowered* variety; and *John Heal*, after *Lorraine* type, but with larger blooms, of a crimson colour and paler centre. The whole batch of plants were a blaze of colour, and proved that they had had the best of cultural attention. Their contribution of *Jacobinia chrysostephana*, a novelty, with terminal heads of bright orange-apricot flowers above broadly oval leaves, was much admired.

Lady Tweedmouth, Brook House, Park Lane, exhibited *Malmaison Carnations Princess of Wales* and *Sir Chas. Freemantle*, the flowers being of immense size and rich colour.

From Messrs. W. Cutbush, Highgate, N., came tree Carnations *Mrs. T. Lawson*, *Mrs. S. J. Brooks*, *Melba*, a good deep pink; *Golden Beauty*, yellow, flaked crimson; *America*, scarlet; *Harry Fenn*, dark crimson; *Sir Hector Macdonald*, a rosy-flaked flower, with white ground, very large and fine; and *Gov. Roosevelt*, intense, deep crimson; *Duchess of Portland*, soft pink; and a new tree, *Viscount Kitchener*, crimson flaked over white, and very large, which received an Award of Merit.

Messrs. Barr and Sons, London, had pompon and single-flowered Chrysanthemums, *Schizostylis coccinea*, *Rosa lucida*, and four cases containing wax models of the newest leading *Daffodils* and *Narcissi*. These were a great source of interest.

G. Ferguson, Esq. (gardener, Mr. F. W. Smith), The Hollies, Weybridge, contributed a sweet collection of single Chrysanthemums, all of them named and well staged.

Messrs. W. Wood and Son, Wood Green, N., set up The Triumph combined watering-can and hand-spray—a useful article.

*Epiphyllum delicatum*, in flower, was shown by Messrs. W. Bull and Sons, 536, King's Road, Chelsea. The flowers are mauve-pink, tipped with white. The graceful *Eugenia myriophyllum* was also shown. Ed. Mawley, Esq., Rosebank, Berkhamstead, contributed a bright collection of Roses.

#### Orchids.

A number of very choice hybrid Orchids were forward. Messrs. Hugh Low and Co., Bush Hill Park, Middlesex, staged *Cypripedium insigne Sanderæ*, *C. Leeannum magnificum*, and *C. i. Harefield Hall* variety, a noble and beautiful flower, with pouch of light brown shade and petals the same, the huge dorsal sepal being yellow towards the base, broadly tipped, and edged white, and spotted with chocolate.

W. P. Burkenshaw, Esq. (gardener, Mr. Barker), The West Hill, Hessele, near Hull, produced the variety described above, *C. i. Harefield Hall* var., and a handsome form of *Lawrenceanum-Curtisi* cross—namely, *C. x. Gowerianum magnificum* Hessele variety, of large size and beautiful purple colour.

Messrs. J. Veitch and Sons, Limited, sent *Cypripedium insigne Sanderæ* (thirteen healthy plants in flower); *C. i. Harefield Hall* var.; *C. Actæas*; *C. Thalia*; and *Cattleya Portia*, with six flowers; *L.-c. Tiresias*, with ten flowers—a superb piece; *C. Mantini*; *Lælia Mrs. M. Gratrix*; *L.-c. Haroldiana superba*, one of the very sweetest and handsomest hybrids at the meeting. They also staged *Lælio-Cattleya Thorntoniana grandiflora* (*Lælia Digbyana* male, *Cattleya Gaskelliana* female), an Orchid of very handsome form and beautiful colour.

Norman C. Cookson, Esq. (gardener, Mr. H. J. Chapman), Oakwood, Wylam, set up a grouplet which included a plant of *Cypripedium insigne Sanderæ*, having eight perfect flowers—the finest piece perhaps in the country; also *C. Actæus Oakwood* var.; *C. insigne Harefield Hall* var.; *Cattleya labiata Oakwoodensis*; and other very choice Orchids.

Messrs. James Cypher and Sons, Cheltenham, filled a space of 15ft by 3ft with *Cypripediums*, *C. insigne Chantini*, *C. i. Sanderæ*, *C. i. montanum aureum*, *C. i. Ernesti*, *C. i. ornatum*, *C. Leeannum giganteum*, *C. Niobe*, *C. i. punctatum violaceum*, *C. i. Harefield Hall* var., and others were all well shown. Their new Orchid catalogue was also seen on the stage, and copies can be had from the firm. *C. Leeannum Bourtoni* is one of the best, and which must not be overlooked.

Captain Holford, C.I.E. (grower, Mr. H. Alexander), Westonbirt, Tetbury, Gloucester, furnished such a contribution of Orchids as perhaps has never been seen at any of these meetings from one private collection. He filled the entire length of a table (66ft by 4ft). There were here over 500 *Cypripedium* flowers—a *C. Leeannum giganteum*, with fourteen blooms; while in the centre of the table was poised a specimen *Cattleya Boweringiana*, bearing ten racemes, one of which had twenty-six flowers, while the ten represented a total of 196 flowers for this one plant. *Oncidium varicosum Rogersi*, backed up by a *Phylllostachys*, was shown in two masses, most effectively. Two plants of *Vanda cærulea* were responsible for ten handsome inflorescences; and among other specially noteworthy plants here were pieces of *Cypripedium insigne Sanderæ*, *C. i. Harefield Hall* var., *C. i. eitrina*, *C. x. Sir R. Buller*, *C. i. Dormani*, and *C. Spicerianum*.

Others who staged Orchids were Baron Schröder, F. Wellesley, Esq., J. E. Fowler, Esq., Dr. Mistens, Mr. H. A. Tracy, and Chas. Maron, Esq., Brunoy, France.

#### Fruit and Vegetables.

Messrs. John Peed and Son, West Norwood, London, S.E., contributed a large collection of clean, well-kept Apples. There were good dishes of *Wellington*, *Belle de Pontoise*, *Lord Derby*, *Lane's Prince Albert*, *Ribston Pippin*, *Mère de Ménage*, *Wealthy*, *Bismarck*, *Allington Pippin*, and *Peasgood's Nonesuch*.

Messrs. J. Veitch and Sons, Limited, sent up a group of culinary and ornamental Kale. Tall Curled Kale, Veitch's Exhibition, Chelsea Exquisite, Veitch's New Sprouting, and some variegated varieties were on view.

#### Certificates and Awards of Merit.

*Begonia Agatha compacta* (J. Veitch & Sons, Ltd.).—This, to many people, would seem to be a very dwarf and compact variety of *B. Gloire de Lorraine*. The parentage is given as *B. socotrana* (female) × *B. natalensis*. The above reference describes it. (Award of Merit.)

*Bulbophyllum Eriesoni* (Hon. Walter Rothschild).—The seven flowers shown in the specimen were arranged on a horizontal plane around the central stem. The dorsal sepal lies back on the stem and the other segments protrude in the opposite direction. Colour green, spotted brown, and lip brownish purple. (Botanical Certificate.)

*Calanthe triumphans* (N. C. Cookson, Esq.).—The colour is amaranth. (Award of Merit.)

*Carnation Viscount Kitchener* (W. Cutbush & Sons).—Flowers over 3in. across, finely built; petals smooth, slightly notched, flaked crimson over white ground. On tall strong stems. Non-splitter. A good Tree. (Award of Merit.)

*Cattleya x Vigeriana* (Chas. Maron, Brunoy, France).—Parentage *C. aurea* × *C. labiata flammea*. A very graceful flower over medium size, coloured a deep rich purple; the lip deeper coloured and velvety, and shaded with brown in the throat on each side of the column. (Award of Merit.)

*Chrysanthemum Belle of Weybridge* (Mr. E. Ferguson, Weybridge).—A handsome single; colour, rich crimson, with orange disc. The fringe of ray petals is half an inch deep. (Award of Merit.)

*Chrysanthemum F. S. Vallis*.—A huge Jap. with recurving smooth florets of a soft sulphury yellow. Large, full and deep. An improved G. J. Warren. (Award of Merit.)

*Chrysanthemum Leila Filkins* (Wells & Co., Ltd.).—A very full rounded Jap. of silvery rose-mauve colour. A very beautiful and meritorious flower of Mrs. T. W. Pockett. (Award of Merit.)

*Chrysanthemum Miss E. Seward* (Mr. W. Seward, Hanwell).—A rich intense golden yellow incurved, shaded bronzy-red. (Award of Merit.)

*Crab, Langley Crab* (J. Veitch & Sons, Ltd.).—A hybrid: *John Downie Crab* × *Apple King of the Pippins*. Shape ovate, apex rather pointed; small. Colour deep-bronze. (Award of Merit.)

*Lælio-Cattleya x Clive var. Sanderæ*.—Parentage, *Lælia pumila alba* × *Cattleya aurea*. A close built flower with broad segments, particularly the petals. These are ivory white flushed lilac. Lip opened at front deep amaranth-purple, the edge folded over the column forming a rosy-lilac tube. (Award of Merit.)

*Lælio-Cattleya Statteriana superba* (J. Veitch & Sons, Ltd.).—Parentage, *Cattleya labiata* × *Lælia Perrini*. A deep mauve-purple colour on petals and segments, with exceedingly rich dark maroon-purple velvety lip, have a white halo in the centre of the tube below, and in front of the column. (Award of Merit.)

*Lælio-Cattleya* × *Thorntoni grandiflora* (J. Veitch & Sons, Ltd.).—Parentage, *Lælia Digbyana* × *Cattleya Gaskelliana*. Perhaps the finest of the Digbyana type of hybrids. The flower is large and of a better form than L.-c. King Edward. The lip is large and finely fringed, coloured a soft yet distinctive mauve with a shade of pink in it. The throat is bright green somewhat shaded with a yellow tint, but green prevails. This is certain to be one of the choicest bigeners for a very long while to come. (First-class Certificate.)

*Jacobinia chrysostephana* (J. Veitch & Sons, Ltd.).—A Mexican species of great horticultural excellence. The stems are quite straight and erect, the leaves placed oppositely with oval-acuminate leaves 6in. long and 3in. broad and prominent ribs. The bright orange-apricot heads of tubular flowers are borne in large clusters terminally. (First-class Certificate.)

#### Medals (Official List).

**FLORAL COMMITTEE.**—Silver-gilt Flora, for a group of Platyceriums, to Messrs. J. Hill and Son, Lower Edmonton; for a group of Chrysanthemums, to Wells and Co., Limited, Earlswood, Redhill, Surrey. Silver-gilt Banksian, for a group of winter-flowering Begonias, to Veitch and Co., Limited, Chelsea, S.W.; for Chrysanthemums, to Mr. H. J. Jones, Lewisham, S.E. Silver Banksian, for Begonias and Chrysanthemums, to Messrs. Cannell and Son, Swanley.

**ORCHID COMMITTEE.**—Large Gold Medal, for a group of Orchids, to Capt. Holford, C.I.E., Tetbury, Glos. Silver Banksian, for a group of Orchids, to N. C. Cookson, Esq., Wylam-on-Tyne. Silver Flora, for a group of Orchids, to J. Veitch and Sons, Limited, Chelsea, S.W. Silver-gilt Flora, for a group of Orchids, to J. Cypher and Sons, Cheltenham. Vote of thanks, for a group of Orchids, to W. P. Burkinshaw, Hessle, near Hull.

Cultural Commendations were awarded to Mr. H. Alexander, Orchid grower to Capt. Holford, for a plant of *Cattleya Bowerlingiana* and *Cypripedium Leeanum giganteum*.

### Bolton Horticultural and Chrysanthemum, Nov. 7th and 8th.

For the fourteenth year the Albert Hall, Bolton, has been requisitioned for the annual Chrysanthemum Show at Bolton, and an excellent display was housed therein on the dates given. The amateurs once again deserved the heartiest encouragement and commendation. Both in floriculture and in vegetables they showed how they can succeed under difficulties in obtaining really excellent results. There were, in addition to the competing exhibits, several collections shown by famous growers, amongst the principal being stands of blooms from Mr. Norman Davis, Uckfield, Sussex, and Messrs. Wells and Co., Surrey; and in Violets Messrs. House and Son, Westbury, showed delightful specimens, including the Princess of Wales and Queen Charlotte.

The society, of which Mr. W. H. Lever is president, Mr. Richard Smith chairman, Mr. H. Shone treasurer, and Mr. H. Makin secretary, offered £130 in prizes, and also four silver cups. The judges (who had a stiff task through the keenness of competition) were Messrs. Elkin (Eccles), C. Osborne (Aigburth), Hathaway (Parks Superintendent, Southport), and Ranger (Liverpool).

The principal prizewinners were J. W. Makant, Esq. (gardener, Mr. H. Shone), Gilnow Lodge; E. T. Crook, Esq. (gardener, Mr. J. Wainwright), Cleveland; J. Heywood, Esq., J.P. (gardener, Mr. G. Pawson), The Pike; E. Ellis, Esq. (gardener, Mr. J. Davies); W. Holland, Esq. (gardener, Mr. W. Barber), of Liverpool; E. Evans, Esq. (gardener, Mr. C. Jones), Old Hall, Cheshire.

### Devizes, November 11th.

The Devizes Benevolent Society avails itself of the Chrysanthemum season to hold an exhibition in the Corn Exchange in conjunction with a bazaar, which is managed by the ladies of Devizes, for the benefit of the above society. Mr. A. J. Randall, Exchange Place, acts as secretary, and Mr. W. King has succeeded his late father as the manager of the show. The best circular group of Chrysanthemums came from Col. C. E. Colston, M.P., Roundway Park, Devizes (Mr. H. Clack, gardener), and Miss Nevill, The Grange, Morden, was second.

The leading class was for twenty-four blooms of Japanese and twenty-four incurved, and there were five exhibitors, Mr. W. Higgs, gardener to J. B. Hankey, Esq., Fetcham Park, Leatherhead, taking the first prize with well developed Japs and highly finished incurveds, having a set of the newer varieties. Mr. G. W. Drake, Cathys Terrace, Cardiff, was a close and remarkably good second; and third, Mr. G. Hall, gardener to Lady Louisa Ashburton, Romsey, Hants. An extra prize was awarded to Mr. J. Bible, The Gardens, Draycot Park, Chippenham.

In the class for twenty-four Japs there were several entries, the first prize being a handsome silver cup, given by the Mayor of Devizes. This was won by Mr. F. S. Vallis, Bromham Fruit Farm, Chippenham, who had very fine blooms indeed. Second, Mr. Geo. Hall, who had in fine character Mrs. H. Weeks, Nellie Pockett, Mrs. Greenfield, Sir H. Kitchener, Calvat's '99, Lord Ludlow, Lord Salisbury, E. Molyneux, Mrs. Mease, Matthew

Smith, Calvat's Sun, Marquis V. Venosta, &c.. Mr. J. Bible was third. Class 4 was for twelve Japanese incurved, Mr. F. S. Vallis again coming in first. His leading blooms were C. J. Salter, Mr. T. Carrington, Calvat's '99, W. R. Church, Ethel Fitzroy, Nellie Pockett, &c. Mr. G. W. Drake was placed second, and Mr. J. Bible was third. With twelve blooms, six white and six yellow, Mr. F. S. Vallis again came in first; Mr. Bible came second, and Mr. H. Clack was third. In the class for twelve blooms of Japanese, not less than six varieties, Mr. Vallis was again first, showing, in fine character, Mrs. J. Lewis, F. S. Vallis, Lord Salisbury, &c. Mr. H. Clack came second, his best blooms were W. R. Church, Lord Ludlow, Lady Hanham, Madame G. Henry, &c. Mr. J. Bible was again third.

### Oxford, November 11th.

The fortieth annual show of Chrysanthemums, fruits and vegetables was held in the Town Hall on Tuesday, November 11. The show was far the best that has been held for years. The entries were numerous and the competition keen. For Chrysanthemum groups Mr. H. Sheppard was first and Mr. F. W. Ogilvie second. For group of autumn flowering and foliage plants, Mr. F. W. Ogilvie was first and Mr. W. T. Mattock second. For six single Primulas: First, Mr. G. Palmer; second, Mrs. Greswell; third, Mr. G. Jacob. Six winter flowering Begonias: First, Mr. G. W. Bennett; second, Mr. W. T. Mattock. For cut blooms, twenty-four incurved Chrysanthemums: First, Mr. H. O. Lovel; second, Mr. S. Brown; third, Mr. G. L. Burgess. Twelve ditto: First, Mr. V. Watney; second, Mr. G. W. Bennett; third, Mr. F. Belcher.

Twelve incurved, one variety: First, Mr. G. W. Bennett; second, Mr. J. L. Burgess; third, Mr. J. Tranter. Twelve large Anemones: First, Mr. G. Burgess; second, Mrs. Bradshaw. Twenty-four Japanese, distinct: First, Mr. S. Brown; second, Mr. G. W. Bennett; third, Mr. G. Ravenor. Twelve Japanese, distinct: First, Mr. W. T. Felton; second, Mr. V. Watney; third, Mr. F. Belcher. Nine Japanese, distinct: First, Mr. S. Mold; second, Mr. J. L. Burgess. Six Japanese, one variety: First, Mrs. Dere; second, Mr. J. W. Bennett; third, Mr. G. Ravenor. Six Japanese, one variety (yellow): First, Mr. J. R. Tranter; second, Mr. G. W. Bennett; third, Mr. W. Felton.

Nine varieties in triplets in vases, Japanese or incurved: First and cup, Mr. G. W. Bennett; second, G. H. Marvell, Esq., M.P.; third, Mr. H. O. Lord. Twelve pompons, distinct: First, Mrs. Inge; second, Mr. J. L. Burgess. Nine pompons, distinct: First, Mr. G. L. Burgess.

Table decorations: First, Mr. G. Jacob; second, Mr. John Mattock; third, Mr. T. W. Mattock. Seven dishes of Apples: First, Mr. H. Smart; second, Mr. John Mattock. Twelve dishes of Apples (six dessert and six culinary): First, Mr. A. Harcourt; second, Mr. R. Price; third, Mr. H. Smart. Six dishes of Apples (three dessert and three culinary): First, Mr. W. T. Mattock; second, Mr. G. W. Bennett; third, Mr. H. Kent. Apples, one dish Blenheim Pippin: First, Mr. A. Harcourt; second, Mr. W. Plaister; third, Mr. W. T. Mattock. Six dishes of Pears: First, Mr. H. Smart; second, Mr. A. Harcourt; third, Mrs. Inge. Three dishes of Pears: First, Mr. W. Hazell; second, Dr. Neil; third, Mr. G. Mopp. Two bunches of white Grapes: First, Mr. S. Brown; second, G. H. Marvell, Esq., M.P. Two bunches of black Grapes: First, Mr. S. Brown; second, G. H. Marvell, Esq., M.P.

There was room for great improvement in the Grape classes, but the Apples and Pears were exceedingly good. Nine dishes of vegetables, distinct kinds: First, Mrs. Bradshaw; second, Mrs. Inge; third, Mr. A. Harcourt. Six dishes of vegetables, distinct kinds: First, Mr. G. Perrin; second, Mr. J. E. Tayler; third, Mr. M. J. Griffin. Three dishes, distinct kinds: First, Mr. J. Tanner; second, Mr. E. W. Reynolds; third, Mr. G. T. Phipps.

Nine Onions: First, Mr. W. H. Dove; second, Mr. J. C. Tayler; third, Mr. G. Perrin. Nine Onions: First, Mr. J. Step-toe; second, Mr. G. T. Phipps; third, Mr. H. Kent. The vegetables were very good, but taste in staging was wanting. The judge of Chrysanthemums was Mr. W. G. Drover, who expressed a high opinion of the groups and the show in general. Messrs. Nichols and Brown judged the fruit and vegetables. The attendance was very large, and the arrangements reflect great credit on the organising abilities of the veteran secretary, Mr. W. Greenaway.

### Ipswich and East of England Horticultural.

The autumn exhibition of the above society was held in the Public Hall on the 11th and 12th inst., the attractions of the floral feast being considerably increased by the performances of the Royal Hungarian Ladies' Band. Generally speaking, the exhibits in all departments were up to the average both in quantity and quality.

The Japanese blooms staged were in most cases large, solid, and of good colour, but occasionally lacked freshness. The incurved section was barely represented at this show. Several



classes are provided by the society for blooms in vases, both for large blooms and decorative kinds, which does much to relieve the monotony generally apparent in Chrysanthemum exhibitions; but the committee might advantageously pay more attention to arranging the vases so as to produce a better general effect.

**CUT FLOWERS.**—In the premier classes for twenty-four Japanese Mr. G. H. Smart, gardener to W. R. Seago, Esq., Oulton Hall, Lowestoft, was placed first, with a good stand, which included excellent flowers of Princess Alice de Monaco, J. R. Upton, Mafeking Hero, Attraction, Madame G. Henry, Madame P. Radaelli, and Lord Ludlow. Mr. A. Haynes, gardener to Colonel Browning, C.B., Brantham Court, Manningtree, was second, having Calvat's 99 and Mrs. J. Bryant, in good condition.

For twelve Japs there was a strong competition, the first prize going to Mr. A. Creek, gardener to Sir C. Donville, Bart., The Chantry, Ipswich, for an excellent stand, the best blooms being Mrs. Mease, W. R. Church (Silver Medal N.C.S. for best bloom in open classes), Mons. Hoste, Pride of Exmouth, Alice Byron, and Mrs. Barkley. Mr. A. Haynes was second with a good stand, and Mr. Smart third. For six of any white variety, Mr. W. Bullam, Mutton Hall, Wetherden, scored with Madame Phillippe Rivoire; Mr. Heath, Hamilton House, Newmarket, coming second with Nellie Pockett. In the corresponding class for any other colour Mr. A. Creek was first with Phœbus, Mr. Haynes second with Australie.

The class for six vases, five blooms of each variety, brought four competitors. Mr. Smart was awarded first, having good sets of Lord Ludlow, Madame Phillippe Rivoire, Mr. T. Carrington, and Kimberley; Mr. Haynes came second, his best being The Princess, Mrs. Barkley, and Vivian Morel; Mr. Heath third.

Much attention was attracted by the class for six blooms arranged for effect with any foliage, the exhibits thoroughly demonstrating the adaptability of large flowers for decoration. Mr. Messenger, Woolverstone Park Gardens, was awarded first for some massive blooms of white and yellow varieties, charmingly arranged with the foliage of the scarlet Oak, Brake, and Asparagus Sprengeri. Mr. Creek was second for an arrangement of yellow and bronze varieties with similar foliage.

Groups are never a strong feature at Ipswich, and on the present occasion were only moderate. For a group of Chrysanthemums with foliage plant Mr. R. C. Notcutt, Broughton Road Nursery, Ipswich, was first; Mr. Strutt, gardener to W. P. Burton, Esq., second; and Mr. Southgate, St. Helen's Nurseries, Ipswich, third. The foregoing exhibitions occupied the same order for a group of miscellaneous plants.

Fruit and vegetables were of good quality (with the exception of Grapes), and competition was keen. The principal prize-winners were Messrs. J. Lindsay, Scott, Messenger, Kettle, Sweet, Trewer Bros., Stowmarket, Andrews, &c.

Mr. R. C. Notcutt, The Nursery, Woodbridge, showed a representative collection of Apples, not for competition, and, likewise, a large collection of Cactus Dahlias, the latter certainly an uncommon feature at a Chrysanthemum show, and a striking proof of the mildness of the season.—E. C.

### Birmingham Chrysanthemum, Nov. 11, 12, and 13.

The forty-second annual exhibition was held in the Bingley Hall on the above dates. As regards the quality of the exhibits, as a whole, it was on a par with that of any previous event. Regarding the groups for effect, it was a matter of regret to observe at least a numerical falling away of this ever attractive class. The foregoing refers to class 9, where the group was to be arranged in a space 20ft wide at back by 12ft deep. Upon this occasion there were but two exhibits, otherwise Mr. Oliver Brasier (a former old exhibitor) was debarred competing at all, by reason, as a matter of prudential delicacy, of his employer (Mr. E. Martineau) being president. As usual, however, he exhibited a superlatively excellent group of specimen plants of Chrysanthemums, and other plants and flowers, not for competition; hence, leaving the competitive honours to Mr. W. Thomson, gardener to J. W. Whitfield, Esq., Moseley, and Mr. Alfred Cryer, gardener to J. A. Kenrick, Esq., Edgbaston, who won as in order named with highly creditable displays. For a group in a space 12ft by 8ft, there were five exhibits, the successful winner being Mr. J. Maldrem, gardener to Geo. Cadbury, Esq., Northfield; Mr. C. Kelland, gardener to A. H. Griffiths, Esq., Edgbaston; Mr. H. Davis, gardener to F. Mantle, Esq., Beechlands; and Mr. S. Coster, gardener to Mrs. T. H. Smith, Handsworth, placed so. On the whole there was to be observed a more than usually good display in quality of blooms and taste in arrangement throughout.

The Birmingham specimen Chrysanthemum plants have long been noted for their excellence, but they were hardly so good this year. In the class for nine plants (Japanese excluded), Mr. J. Maldrem was to the fore as the only exhibitor. For six large flowering plants, Mr. Maldrem won against his formidable rival, Mr. A. Cryer; third, Mr. C. S. Sheppard, gardener to Mrs. T. Simpson, Edgbaston.

Special mention must be made of Mr. James Austin's group of Chrysanthemums from Alder Road, Sparkbrook, a brasswork operative (and whose fine group of Chrysanthemums of last year were figured in the Journal of October 16 last). Apart from the excellence of the group in question, it was rendered additionally interesting to a numerous lot of admirers as being the product of a mechanic who works at the rate of fifty-four hours a week, two miles from his home. Mr. Austin, too, exhibited on the front of his group a copy of the *Journal of Horticulture*, for visitors to note the photogravure, for the two remaining days of the show. At the judges' luncheon the president of the society paid a high compliment, in the course of his speech, to Mr. Austin's ability and effective group; and a similar compliment was accorded Mrs. E. Pitt, florist, Acock's Green, in recognition of her artistically arranged dinner-table floral display of Source d'Or Chrysanthemums, defeating the remaining nineteen competitors in a very keen contest, the greatest yet produced at the Birmingham exhibitions.

In the honorary exhibits, Messrs. Perkins and Sons, Coventry, added to their fame by exhibiting one of the largest and best of their artistic floral "concoctions" yet contributed by them, and a cunningly devised floral "grandfather's clock," with a real "Greenwich time" clock, and the figures composed of Holly berries. Messrs. Lohrmann and Co., florists, Birmingham, also contributed a large and grand display of bouquets and other floral devices, though it left considerable room for improvement, as numbers of the exhibits were too much hidden by the bolder ones. Messrs. Perkins were placed first (in the class for nurserymen only) for a hand bouquet, whilst Messrs. John Pope and Sons were second; Mr. W. Finch, Coventry, was placed third. It should here be remarked that Messrs. Pope and Sons also contributed a very attractive floral device in the shape of a large gate composed of white Chrysanthemums, arched with autumn-tinted foliage.

Mr. H. Whately, Kenilworth, were responsible for a fine and large display of Orchids. Mr. Thomson, of Sparkhill, had a very striking trophy of plants in variety, the principal feature being the large mass of *Salvia splendens superba*.

Mr. Walter Child, nurseryman, Acock's Green, distinguished himself by a large collection of herbaceous and Alpine plants, flowering and berried dwarf plants, suitable for the rockery, most effectively arranged.

Mr. R. Greenfield, jun., Leamington, put up a fine lot of his newly-introduced *Asparagus myriocladus*. Messrs. Webb and Sons, Stourbridge, as usual, made a fine and representative display of vegetables, *Begonia Gloire de Lorraine*, *Cyclamens*, &c. Messrs. R. Smith and Co., Worcester, had a very fine collection of Apples, Pears, and vegetables. Messrs. Hewitt and Co., Birmingham, were distinguished by a fine arrangement of plants in variety.

Messrs. John Peed and Son, West Norwood, sent a remarkably fine and highly creditable collection of Apples and Pears. Messrs. W. Wells and Co., Earlswood, Surrey, sent a large assortment of seedling and other cut Chrysanthemums. Messrs. House and Son, Westbury, staged a fine collection of Violets, of blue, white, and sulphur hues.

Messrs. Clibran, Manchester, were represented by a splendid group of *Celosias* and Chrysanthemums in variety. The King's Acre Nurseries Company, Limited, Hereford, had one of their notable displays of Apples and Pears. Mr. H. Deverill, Bankway, contributed a striking display of *Pelargoniums* in bunches; Mr. Pewtress, Hereford, had an extraordinary fine display of Apples; Mr. Hamill, of the Vineries Company, Limited, Acock's Green, had an attractive group of Chrysanthemums; and Mr. Udale's (Droitwich) collection of vegetables, grown under the influence of animal and chemical manures, experimentally, of which further reference may be made at an early date. A large assortment of dried fruits were included in this economic contribution.

Considering the very considerable effectiveness rendered to the exhibition by the non-competitive trade growers, we deem it but just in having so far drawn special attention to them, comparatively brief though the descriptive notes are, and the committee signified their appreciation of the contributions by awarding medals and special certificates at the discretion of the judges.

Vegetables formed a feature of the show, and for quality were never excelled. Space will not allow of a detailed list of the whole of the prizes awarded. The principal awards were for the collections of nine kinds, and Mr. E. Beckett (gardener to Lord Aldenham, Elstree) led, and Mr. A. G. Gentle (gardener to Mrs. Dennison), Berkhamstead, second. The liberal special prizes offered by the trade—such as by Messrs. Sutton and Sons, Reading; R. Smith and Co., Worcester; Webb and Sons, Stourbridge; and Pope and Sons, Simpson and Sons, Thomson and Co., all of Birmingham—were liberally responded to; whilst Mr. R. Sydenham's numerous prizes were also potent in effecting a strong competitor. His open silver challenge bowl was awarded to Mr. H. Folkes, gardener to the Right Hon. T. F. Halsey,

Hemel Hempstead, with 47 points out of a possible 60. Mr. Sydenham's local challenge vase was won by Mr. J. R. Waters, Sheldon, with 50 out of 60 points, second year outright.

As the vase blooms have already been briefly noticed, it must suffice to remark that the exhibits contained the best varieties extant, and that the successful contestants were Mr. E. J. Brooks, gardener to Colonel C. Beech, Coventry, first, with grand blooms; second, Mr. J. Risk, gardener to J. H. Hadfield, Esq., Ross; and third, Mr. J. H. Goodacre.

For six Japanese blooms, distinct, Mr. T. Pritchard was placed first, and Mr. J. Jennings, gardener to Leopold de Rothschild, Esq., Ascott, second. Both exhibits contained grand creations of bloom.

In the class for eighteen blooms of incurved varieties, Mr. R. Jones, Barford, Warwick, was the only exhibitor. We may here observe that in the above exhibit, also of others, the leading varieties extant were on view, and it would be superfluous to append the names. In the class for eighteen Japs, Mr. E. J. Brooks, Mr. J. Risk, and Mr. R. Jones were the leading winners as named. For twelve incurveds, Mr. J. V. Macdonald, Edgbaston, led; and second, Mr. C. Batchelor, Edgbaston. For twelve incurveds, Mr. R. Jones was placed first; the second prize was not awarded; and third, Mr. W. Manning, of Dudley. For six white Japs, Mr. J. Jennings, Mr. C. Batchelor, and Mr. H. Woolman, Acock's Green, were the respective winners. For six blooms of any one variety of yellow Japanese, Mr. Neal, Bampton, led the way; second, Mr. C. L. Branson, Coleshill. For twelve blooms Japanese with foliage, Mr. J. V. Macdonald was first. In the remaining few local classes there was also a very good competition.

Primulas were unusually well staged, and the first prize exhibits in the various classes reflected great credit on Mr. C. H. Herbert (Messrs. Thomson and Co.'s expert grower). The same remark applies to Mr. A. Cryer; Messrs. Pope and Sons; Mr. R. Dixon, gardener to Viscount Cobham, Hagley Hall, Stourbridge; and Mr. R. G. Rudd, gardener to R. C. Cartwright, Esq., King's Norton. Contributions in the classes for Primulas and Cyclamens were highly meritorious.

The fruit classes were not so numerously represented as on the last occasion, more regarding to Apples and Pears. For a collection of British-grown fruit, Mr. G. Mullins, gardener to Lady Henry Somerset, trotted in with very good bunches of black and white Grapes, Melons, Apples, and Pears; second, Mr. H. Weeks, Derby, with a smaller collection; and third, Mr. J. Read, with Grapes, Apples, and Pears. Grapes were more remarkable for quality than quantity. In the class for six bunches, not less than three varieties, open, Mr. G. Mullins was the victor; second, Mr. J. Jones; and third, Mr. J. Lockhart. For three bunches of black Grapes, Mr. Mullins again secured first honours, with perfectly finished bunches of Gros Colman; Mr. J. Jones, gardener to Mrs. Needham, Malvern, second; and third, Mr. J. Lockhart, Warrington. For three bunches of white Grapes, Mr. J. H. Goodacre went to the front. For two bunches of white Grapes, Mr. H. Folkes was the solitary exhibitor. For two bunches of black Grapes, grown within four miles of Stephenson's Place, Birmingham, Mr. C. Kelland, Mr. A. Cryer, and Mr. R. Sheppy, gardener to T. W. Petersen, Esq., were the respective winners. For two bunches white Grapes, Mr. C. Kelland, gardener to A. H. Griffiths, Esq., Edgbaston, and Mr. R. Sheppy scored with very good Muscat of Alexandria.

### Reading Chrysanthemum, November 12th.

A large show—filling the Old and the New Town Hall—of general high quality, and a record attendance, were the leading characteristics of this annual exhibition. The fifty-seven classes in the schedule of prizes were generally well filled, and the judges were set a heavy task. The Reading Society Challenge Cup, offered for the best group of disbudded plants grown in pots was won for the third time by Chas. E. Keyser, Esq., Aldermaston Court (Mr. Galt, gardener), with an extremely fine display, arranged as a circle, and Mr. Galt is to be congratulated on his third successive win. Mr. W. B. Monck, Reading (Mr. Docker, gardener), was second.

Specimen plants were poorly shown if we except the two trained specimens set up by Mr. Booker; they were Vivian Morel and Val d'Andorre. Mr. Booker was also first with two single-flowered and two pompons.

The cut flower classes were generally well filled. The best twenty-four incurved blooms came from Mr. J. B. Hankey, Fetcham Park (W. Higgs, gardener), a well-finished, level collection of blooms which contained fine examples of Hanwell Glory, Duchess of Fife, Pearl Palace, Thos. Lockie, Charles Curtis, Globe d'Or, Mrs. F. Judson (the new white incurved), Countess of Warwick, Ma Perfection, Mrs. H. J. Jones, J. Agate, &c. Mr. Bible, The Gardens, Draycot Park, Chippenham, was second, having varieties in the main similar to those named. Mr. W. L. Bastin, Buscot Park Gardens, was third.

With twenty-four Japanese Mr. Higgs was again first; Mr. Nicholl, The Gardens, Strathefieldsaye, was a good second; and

Mr. Bible third, and so good was the competition that two extra prizes were awarded. With twelve incurved, Mr. Page, The Gardens, Dropmore, came first with good blooms, and Mr. G. W. Bennett was second. Mr. Galt was a good first with twelve Japs, Mr. Page coming second, and Mr. Bastin third.

A class for six vases of Chrysanthemums, three blooms in a vase, brought a brisk competition. Mr. Barnes, The Gardens, Bearwood, Wokingham, was placed first with well-developed blooms, Mr. Nichols being a close second, and Mr. Cole third. With twelve bunches of singles, Mr. Leonard Sutton was placed first with fresh bright flowers of good quality; Mr. R. Hewett was second.

With six blooms of Japs, one variety, Mr. Galt came first with fine flowers of W. R. Church, Mr. Nichols was close up with Mrs. G. Mileham, and Mr. Bennett third with Vicar of Leatherhead. With six incurved, one variety, Mr. Higgs came first with excellent Charles Curtis, Mr. Bastin came second with Duchess of Fife, and Mr. Galt third with Lady Isobel. Vases of six blooms of one variety of Jap made a fine feature. Mr. Nichols came in first with R. H. Pearson, very fine; Mr. Cole coming second with W. R. Church, the competition being very close indeed.

There were several classes for plants. Berried subjects were those of hybrid Solanums. Groups of zonal Pelargoniums filling an allotted space made a bright feature. Good Orchids were shown in threes by Messrs. J. B. Taylor and P. H. Evans, Pangbourne. There were Poinsettias, plants for table decoration, fine Palms, handsome Kentias predominating, charming Cyclamens, shown in sixes, Begonia Gloire de Lorraine. Messrs. Bible and M. H. F. Sutton having remarkably well-grown and flowered examples, and there was also groups of Chrysanthemums shown by single-handed gardeners. Cut Roses shown in two classes were a pretty feature. There were several classes for Grapes, Apples, and Pears. The chief prizewinners here were Mr. Cole, Swallow Park; Mr. Barlow, Balmore; Mr. Exler, Easthorpe; Mr. M. H. F. Sutton; Mr. Galt; Mr. J. B. Taylor; Mr. Nichols; Mr. C. W. Caddock, Ross, Hereford; Mr. R. Webb, Beenham; Mr. C. O. Walter, Wantage; and Mr. Page, Dropmore.

Of miscellaneous exhibits there were plants of Begonias Gloire de Lorraine and Turnford Hall from Mr. Herbert Sutton; bottled and evaporated fruits from the Lady Warwick Hostel, Reading; and a large bank of various designs in floral decoration—all of a high order of merit—from Mr. Phippen, Court florist, Reading.

### Banbury, Nov. 12th and 13th.

The annual Chrysanthemum show was held in the Town Hall on Wednesday and Thursday, November 12 and 13. The entries were more than last year, and the competition was much keener. The two days were fine, and there was a record attendance. The judges were Messrs. W. Drover and E. Beckett. The chief prizewinners were as follows:—For thirty-six Japanese blooms: First, Mr. F. J. Myers (gardener, Mr. J. M. Bush); second, Mr. G. Williams (gardener, Mr. G. Gerrish); third, Lord Algernon Gordon-Lennox (gardener, Mr. S. Low). Twelve blooms arranged with foliage, first, Mr. W. C. Cartwright (gardener, Mr. S. Brown); second, Mr. Myers; third, Mr. W. H. Foster-Melliar (gardener, Mr. J. Swain). Eighteen blooms: First, Mr. W. C. Cartwright; second, Mr. A. R. Motion (gardener, Mr. T. G. Flanders); third, Mr. J. G. Ravenor. Twelve blooms: First, Mr. W. T. Felton; second, Mr. T. M. L. Cartwright (gardener, Mr. G. Stocklev); third, Mr. J. Allen (gardener, Mr. G. A. Haynes). Six blooms, white: First, Mrs. Deare (gardener, Mr. T. Robinson); second, Mr. A. R. Motion; third, Mr. Ravenor. Six blooms other than white: First, Mr. Myers; second, Mr. Ravenor; third, Mr. W. C. Cartwright. Twelve incurveds: First, Mr. W. C. Cartwright; second, Mr. Smith-Ryland; third, Mr. J. L. Burgess. Six incurved: First, Mr. J. G. Williams; second, Mr. Motion; third, Mr. Smith-Ryland. Twelve reflexed: First, Mr. J. L. Burgess; second, Mr. Foster-Melliar; third, Captain Cottrell-Dormer (gardener, Mr. H. Wingrove). Twelve Anemones: First, Mr. Foster-Melliar; second, Captain Cottrell-Dormer; third, Mr. J. L. Burgess. Twelve bunches of pompons (not Anemones): First, Mr. J. L. Burgess; second, Mr. Foster-Melliar; third, Captain Cottrell-Dormer. Six ditto: First, Miss Gillet; second, Captain Cottrell-Dormer. In the bouquets and sprays Messrs. Perry and F. Tyrrell took the leading prizes.

For Begonias: First, Mr. Motion. Primulas: First, Mr. Motion. Cyclamen: First, Mr. Foster-Melliar.

The leading prizewinners in the fruit classes were Messrs. Walter, Williams, Wadham, Belcher, Cartwright, Holland, Wells, Perks, and Captain Cottrell-Dormer. In the vegetable classes the competition was keen and the produce good. For Potatoes Messrs. Wells, Taylor, Wadham, and Tooley were the chief winners. For Onions (twelve): First, Mr. Dunnell; second, Mr. S. Taylor; third, Mr. Perks, M.P. For collection of vegetables: First, Mr. R. Wadham; second, Captain Cottrell-Dormer; third,



Mr. S. Taylor. Tomatoes: First, Mr. Perks, M.P.; second, Mr. H. Boxold; third, Capt. Cottrell-Dormer. The non-competitive exhibits were from Messrs. Perey, Clow, Townsend, and Colchester.

The duties of secretary have been carried out ably for many years by Mr. W. H. Walkley. Mr. Walkley has been elected Mayor of Banbury, an office which he will no doubt ably fill.—S. H.

### Hull, November 12th and 13th.

The annual show was held in the Artillery Barracks, and like many held this season, suffered a little in point of quality as well as in numbers. The management here, who are always on the look-out for new features of interest for the benefit of their patrons, instituted an entirely new class—that for two pillar groups, each on a ground space 6ft by 4ft, a mirror panel group on a ground space of 9 square feet, and a hanging basket; the pillars 15ft high. The whole to be decorated with Chrysanthemums and miscellaneous plants (except Orchids). Four competed, making an interesting display. Mr. V. Waterhouse, gardener to W. T. Owbridge, Esq., The Grange, Cottingham, secured the premier award of a silver cup and £7 for a bold yet effective display. Although wanting a little in detail arrangement, a trifle too much cork and dull-coloured moss was to be seen. Large-flowered Japanese Chrysanthemums made a capital display, associated as they were with suitable foliage plants. The hanging basket contained a magnificent plant of *Asparagus Sprengeri*. The second prize group, from Mr. G. Coates, gardener to S. L. Haldane, Esq., 114, Coltman Street, Hull, was more artistically arranged, but was lacking in boldness. The tall pillars were too sparsely flowered, showing a trifle too much greenery; still, it was an exceedingly close second. The mirror was charmingly decorated. Mr. J. Foster, jun., "Swiddy's," Newland, third, with Messrs. Tattersall and Judson, East Park Nurseries, Hull, fourth.

Three competed in a class for a group of miscellaneous plants arranged for effect in 100 square feet. Mr. J. Foster, jun., secured the leading award for an arrangement a trifle crowded in the centre, yet containing many handsome Chrysanthemums, foliage plants, and Orchids, all tastefully blended together. Mr. T. M. Peteh, gardener to Mrs. Bennington, Mona House, Sutton, second with an arrangement a trifle "thin."

Chrysanthemums in pots exhibited somewhat the result of a backward season. What are known here as "cut backs," to induce dwarfness with good foliage and flower, were creditable. For six plants Mr. R. Thirsk, 11, Grove Villas, Beverley, secured the leading award with *Vivian Morel*, especially good in condition, each plant carrying about five good blooms; Mr. Coates second. Mr. R. Thirsk also had the best bush-grown plants, staging the three members of the *Vivian Morel* family. Mr. W. H. Young, 16, Florence Avenue, Somerscales Street, Hull, won for three trained specimens.

Cut blooms were fairly numerous, and of good quality; but one class is here provided for large blooms in vases—that an attractive one—three distinct Japanese, five blooms of each, and which produced keen competition and a good display of high class blooms. Mr. F. S. Vallis, Fruit Farm, Bromham, Wilts, was an easy first prizetaker with very fine examples of *T. Carrington*, *Edwin Molyneux*, and *Mrs. J. Lewis*. Mr. G. Walker, gardener to C. E. A. Lyon, Esq., The Lair, Hornsea, was second; Mr. C. Jennings, gardener to F. W. Jameson, Esq., Aston Hall, North Ferriby, third.

Incurved varieties showed a slight falling off in point of numbers. For twenty-four in not less than eighteen varieties but two competed, Mr. J. Mudd, gardener to J. Cutts, Esq., 8, Zulla Road, Carrington, Nottingham, was first with large, somewhat rough blooms; F. Palmer, Louisa Giles, Ialene, Nellie Southam, and Ma Perfection were the most noteworthy. Mr. A. Jones, Hadley Manor, Barnet, Herts, second.

Five competed with twenty-four Japanese distinct, making a good display. Mr. Vallis once more scored an easy victory with large, well-developed examples of *Mrs. Mease*, *Australie*, *Mrs. J. Lewis*, *Le Grand Dragon*, *Marquis Vicomte Venosta*, *G. J. Warren*, *Mrs. Vallis*, *Edwin Molyneux*, *Mons. Chenon de Leché*, *Madame Carnot*, *Mrs. J. Bryant*, *Madame Paolo Radaelli*, *Matthew Smith*, *Calvat's '99*, *W. R. Church*, *T. Carrington*, *M. Louis Remy*, *Madame Herrewége*, *Mrs. Hummell*, *F. S. Vallis* fine; *Nellie Pockett*, *Mrs. Barkley*, *Charles Longley*, and *Ethel Fitzroy*. Mr. T. Mudd second; Mr. J. P. Leadbetter, gardener to A. Wilson, Esq., Tranby Croft, Hull, third.

Anemone-flowered varieties were well shown by Mr. T. B. Hanson, gardener to W. R. Ringrose-Voase, Esq., J.P., Anlaby House, Jarrow; *Descartes*, *Mrs. Judge Benedict*, and *Nelson* were the best. Mr. Coates second. Mr. R. Walker, gardener to Major Stracey, Clitheroe, Hotham Hall, Brough, won for twelve reflexed with typical examples of golden and pink *Christine*, *Florence Lunn*, and *Dorothy Gibson*. Mr. H. Willcocks, gardener to A. S. Wilson, Esq., M.P., Raywell, Cottingham, second. The best pompons in twelve bunches were staged by Mr. W. Goodhill, Mayfield Avenue, Hull; the best single-flowered by Mr. T. B. Hanson.

Local classes were much better represented than those open. Especially good were the incurved blooms in the class for eighteen, for which a silver cup and a money prize was offered, Mr. C. Jennings winning the coveted position with much the best blooms in the show; *Miss Annie Hills*, *Duchess of Fife*, *Globe d'Or*, *Hanwell Glory*, and *Matthew Russell* were particularly fine. Mr. C. Flower, gardener to R. Hodgson, Esq., Molescroft, Beverley, second. For twelve incurved, not less than nine varieties, five competed, Mr. R. Walker winning with typical examples of *Madame Ferlat*, *Lord Alcester*, *Princess of Wales*, *Hanwell Glory*, and *J. Agate*; Mr. C. Jennings a close second.

Japanese were a strong feature. For eighteen distinct, five staged. The best, a heavy set, came from Mr. G. Walker, gardener to C. E. A. Lyon, Esq., The Lair, Hornsea; Mr. J. W. Backhouse, The Bar, Beverley, second. Mr. G. Walker also won for twelve Japanese, Mr. C. Jennings second. A most interesting class was that for two bunches each, three blooms in a bunch, of *Mrs. G. Rundle*, *Mrs. Dixon*, and *G. Glenney*. Mr. V. Waterhouse just won with typical examples of these old favourites. Mr. W. H. Franklin, Cheney Garth, Cottingham, an exceedingly close second. Amateurs staged capital blooms in their classes.

The premier Japanese bloom in the show was *Florence Molyneux*, exhibited by Mr. J. W. Backhouse in a local class, beating many in the open division; a similar honour falling to *Fred Palmer*, incurved, staged by Mr. Mudd in the open class for twenty-four.

The classes open to ladies only here are always an important feature, shown as they are by gaslight. The leading class is that for the best decorated dessert table, 8ft by 4ft, completely laid out for six persons, Chrysanthemums to be the only flowers used, with any kind of foliage or grasses. A piece of challenge plate value ten guineas, with a sum of four guineas added, is the leading prize. Six entered, making a capital display. *Miss Fanny Kirk*, Owstwick Hall, Burstwick, Hull, once more succeeded in winning the coveted award, and as this is the third time, it now becomes her absolute property. White Chrysanthemums were employed, which harmonised so well with the richly coloured sprays of *Ampelopsis Veitchi* and deep green *Asparagus*. The fruit and silver were all of a choice character, the whole exhibit being worthy of its position. *Miss Ethel G. Fisher*, Willesby Hall, Hull, a creditable second; *Miss A. K. Brown*, Preston Cottage, Hull, third.

A capital class was that for the most tasteful arrangement of cut flowers with any kind of foliage, grasses, and berries on a table-space of 3ft each way. *Miss Ethel G. Fisher* was an easy first with good Japanese Chrysanthemums associated pleasingly with *Asparagus*, &c. *Miss W. Kirk* second; *Miss Ella Pudsey*, Anlaby Road, Hull, third. *Miss B. Kirk*, Owstwick Hall, Hull, had the best Chrysanthemum epergne for a dinner table, being closely followed by *Mrs. H. Scotter*, 116, Argyle Street, Hull.

### Liverpool Horticultural, Nov. 12th and 13th.

The twenty-third Chrysanthemum and Fruit Show is past and gone, and the general opinion of all visitors is that the proud name which Liverpool growers have always maintained is not in the least tarnished, but rather enhanced, by the high standard throughout the more than close competition, and an altogether brighter and more diversified arrangement than has hitherto been seen in the handsome St. George's Hall.

The topic uppermost in the minds of exhibitors is now (as always) the cup class for twenty-four incurved and twenty-four Japanese, and once again that excellent cultivator, Mr. J. Heaton, gardener to R. P. Houston, Esq., M.P., The Lawn, Aigburth, scored a great victory, taking, for the fifth year in succession, this valuable prize, which, in addition to the money given by the Association, carries with it the beautiful twenty guinea challenge cup presented by Mr. Houston. This is a record in the annals of Liverpool horticulture, and a more deserved honour and a better recipient for the prize than Mr. Heaton could not well be found. The services of Messrs. T. Foster, chairman; Mercer, vice-chairman; and H. Sadler, secretary, deserve hearty recognition. The show was visited by the newly elected Lord Mayor (Mr. Watson Rutherford) and the Lady Mayoress.

Cut Blooms.—In every class there was a spirited competition, the cup drawing five exhibitors, Mr. Heaton winning with fresh, deep, and highly coloured flowers, much enhanced by the fact that all his Japanese had simply an incurved cup as their support, the Japanese cup being for the nonce dispensed with. The varieties were *Rev. W. Wilks*, *Mrs. Mease*, *Mafeking Hero*, *Mrs. J. Lewis*, *G. Carpenter*, *M. L. Remy*, *Lady Ridgway*, *Madame G. Henri*, *Mrs. Greenfield*, *Mrs. J. Coutts*, *Edith Shrimpton*, *Mrs. J. Bryant*, *Miss E. Fulton*, *W. R. Church*, *Mrs. Barkley*, *M. Chenon de Leché*, *Pride of Exmouth*, *C. Longley*, *Loveliness*, *Alice Byron*, *Sir H. Kitchener*, *Phœbus*, *Nellie Pockett*, *Lord Ludlow*, *Mrs. M. Molyneux*, *C. Curtis*, *Mrs. H. J. Jones*, *Madame Ferlat*, *General Symons*, *Lady Isabel*, *Ernest Cannell*, *Duchess of Fife*, *Mrs. Egan*, *C. Bruant*, *Ialene*, *Queen of England*, *Nellie Southam*, *J. Lambert*, *J. Doughty*, *Parlé Palace*, *Lord Alcester*, *Topaze*

Oriental, Hanwell Glory, W. Tunnington, J. Agate, Mr. W. Harvey, and N. Perkins. A capital second was Mr. Findlow, gardener to A. J. Oakshott, Esq., Oaklands, Lower Bebington, his best being Godfrey's Pride, Mrs. Barkley, Marquis V. Venosta, Madame Paolo Radaelli, C. Longley, Bessie Godfrey, Madame Ferlat, Topaze Oriental, F. Palmer, and Annie Hills. Mr. W. Whittle, gardener to R. G. Allan, Esq., Rosemont, Aigburth, a very close third, and Mr. G. Haigh, gardener to Sir W. Tate, Bart., fourth.

Incurved were good considering the season, the eighteen being captured by Mr. P. Greene, gardener to Colonel T. Gee, Allerton, with General Symons, W. Tunnington, Lady Isobel, E. Cannell, Annie Hills, and J. Lambert. Mr. J. Young, gardener to S. Williamson, Esq., Otterspool, was the second, and Mr. C. Osborne, gardener to A. Cook, Esq., Aigburth Hall, third.

For twelve, Mr. T. Carling, gardener to Mrs. Cope, Dove Park, Woolton, scored with fine blooms of Lady Isobel, F. Palmer, and C. Bruant; Mr. G. Osborne, gardener to Dr. Cook, Tue Brook, second. Mr. J. Powell, gardener to Mrs. Whittle, for six. A decided victory was won by Mr. J. George, gardener to T. Henshaw, Esq., Whitefield House, Roby, for eighteen Japanese, Mrs. Crompton, W. R. Church, Mrs. Barkley, C. Longley, T. Carrington, Ella Curtis, Pride of Madford, and Lord Ludlow being special. Mr. J. Young second, and Mr. J. Osborne third, each showing very strong. Five staged. Six competed for twelve Japanese, the winner, Mr. C. Jones, gardener to E. Evans, Esq., Spital Old Hall, having fine Mrs. Mease, W. R. Church, and Mrs. Barkley; second, Mr. G. Osborne; third, Mr. T. Eaton, gardener to J. Parrington, Esq., Roby Mount, Roby. For six, Mr. J. Bradshaw, Rock Ferry.

The Vase Competition was composed of bold flowers, short of elevation, but a splendid class withal, Messrs. J. George and J. Williams being first and second respectively.

The trade quite excelled all previous efforts, Messrs. R. P. Ker and Sons, Aigburth, contributing superb Cyclamen, Begonias Gloire de Lorraine and Caledonia, &c. The mildness of the season was exemplified by a beautiful selection of Caetus Dahlias from Messrs. Diekson, Limited, Chester.

Messrs. Rowlands, West Derby, and T. Davies and Co., Wavertree, had rich miscellaneous plants. A table of very choice Orchids from Messrs. Jno. Cowan and Co., Limited, found many admirers.

From Messrs. W. Wells and Co., Earlswood, Surrey, came several new varieties of Chrysanthemums, S. T. Wright being eagerly sought after. A great attraction in the show were the superb samples of Apples from Messrs. Alexander Diekson and Sons, Newtownards, Co. Down, and Ledbury.

The fruit classes at Liverpool are almost as much admired as the cut blooms. The high coloured Apples and Pears from Mr. J. Davis, gardener to W. E. King King, Esq., Bodenham; the splendidly finished Museat of Alexandria and Golden Queen Grapes from Mr. Skitt, gardener to Mrs. H. A. Bright; Knotty Ash, Alnwick; seedling from Mr. T. Elsworthy, gardener to Messrs. W. L. and R. F. Gladstone, Court Hey, Broadgreen; Alieantes from Mr. J. Barker, gardener to J. W. Raynes, Esq., Penniaen, Old Colwyn; and Muscats and Alicantes from Mr. Hammond, gardener to Colonel Blackburne, Hale Hall, all kept up the high standard usually seen here.

Orchids were much superior, making a brilliant display in front of the orchestra, Messrs. J. Bracegirdle, gardener to W. H. Watts, Esq., F. Keightley, gardener to Mrs. Dunean, W. Barber, gardener to Walter Holland, Esq., and W. Fleetwood, gardener to Dr. Solomon, each scoring victories.

Miscellaneous plants were a distinct feature, the class for Begonia Gloire de Lorraine proving strong, delightful examples coming from Mr. E. R. Finch, gardener to G. Smith, Esq., Newstead, Wavertree. Poinsettias from Mr. W. Lyon, gardener to A. Mackenzie Smith, Esq., Bolton Hey, Roby, and Mr. J. George, gardener to T. Henshaw, Esq., Whitefield House, Roby, caused quite a sensation, so well were they grown. Mr. Bracegirdle made a big hit with exotic Ferns and Chrysanthemum group. Table decorations looked attractive; pity is that in the floral work a breakaway cannot be made in colour from the bronze, of which there was an altogether overpowering array.

A capital basket came from Mr. G. Haigh, gardener to Sir W. Tate, Bart., Highfield, Woolton; that for the best table going to Mr. Armistead, gardener to Mrs. T. A. Vlasto, Sefton Park. Trained and staked plants made a fine contribution, the prizes falling to Messrs. J. Rose, gardener to J. G. Kitchen, Esq., West Derby, H. Wilson, gardener to H. Cunningham, Esq., Gateacre, F. Keightly, gardener to Mrs. Dunean, Grassendale. —R. P. R.

### Parkstone, November 12th and 13th.

This society held its tenth annual exhibition of Chrysanthemums, fruit, and vegetables on November 12 and 13. Undoubtedly it proved to be a better show than any of its predecessors. Both days were beautifully fine, and visitors came to the show in large numbers, and were feasted with a splendid

display of blooms, both in a cut state and growing on plants in pots. Evidently the culture of the Chrysanthemum is one of the chief recreations of the people of Parkstone, if one may judge from the results of their efforts and the liberal support which they give to the society. The officials are to be congratulated upon their good work.

In the leading class for twenty-four Japanese cut blooms, not less than eighteen varieties, Mr. W. H. Dore, of Branksome Towers, was an easy first. His stand contained some really grand flowers; J. R. Upton, Mrs. Barkley, W. R. Church, Australie, J. Molyneux, and Miss A. Byron were extra good. The last named was awarded the prize for the premier Japanese bloom in the show.

Incurved sorts are generally well staged at this show, notwithstanding the fact that this section is not so popular as it was a few years ago. The Rev. C. H. Burrows secured first prize for a nice even stand of blooms, in which Ma Perfection was selected as premier incurved flower in the show. A new feature is the class for cut blooms with long stems, staged as cut, in deep vases.

In the vegetable and fruit classes Messrs. Horlock, Rabbits, Honeybun, and Riggs were the chief prizewinners. Table decorations are always very tastefully shown at Parkstone. Mr. Palmer carried off chief honours for a dinner-table decoration, in strong competition, Miss M. D. Kelly being a very close second. For a single epergne of mixed flowers and foliage Miss Vivian was first, and Miss K. Light second. The last named lady secured first prize for three buttonhole bouquets, Mrs. Riggs taking second place. For shoulder sprays of mixed flowers and foliage Miss Light again carried off the first prize, and Mrs. Palmer the second.

The amateurs' and cottagers' classes were well filled with fine produce. The youngest exhibitor was eight years of age and the oldest eighty-five, the latter entering the lists for the first time—truly a veteran with commendable hope and pluck.

### Winchester, Nov. 12th and 13th.

This society held its twentieth annual autumn exhibition in the Guildhall, and was in every way a great success. There were numerous entries, and the quality of the exhibits far surpassed those of many other societies of the present season. The arrangements were, as usual, well carried out by the energetic secretary, Mr. C. Shenton, assisted by an efficient committee, whose chairman, F. W. Flight, Esq., takes keen interest in all points of horticulture.

CUT BLOOMS.—The class in which most interest centres is that for forty-eight blooms, twenty-four incurved, the remainder Japanese, all distinct, and for which a challenge cup is offered, together with substantial money prizes. There were four entries. Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, was first with fine blooms in the Japanese section, whilst the incurved left but little to be desired. The varieties were:—Japanese: Duchess of Sutherland, T. Carrington, Mons. Louis Remy, Sir H. Kitchener, Edith Dashwood, Alice Byron, W. R. Church, Madame Paolo Radelli, Mrs. E. W. Palmer, Mrs. T. Wood, Emily Towers, Mrs. T. Poekett, General Hutton, Mrs. W. Weeks, Violet Lady Beaumont, Mons. C. de Leché, Mrs. Greenfield, Lord Salisbury, Lord Ludlow, Marquis V. Venosta, Ethel Fitzroy, Jane Molyneux, Mrs. W. Cursham, Le Grand Dragon. Incurved: Frank Hammond, Ma Perfection, Hanwell Glory, Nelly Southam, Lady Isobel, Louisa Giles, C. H. Curtis, Madame Ferlat, Pearl Palace, Fred. Palmer, Matthew Russell, Thomas Lockie, Nellie Threlfall, Chrys. Bruant, Comtesse d'Estoile, Mrs. R. King, Mrs. W. Howe, Major Mathew, Topaze Orientale, Duchess of Fife, Madame de Verneuil, Miss A. Hills, Mons. Bahuant, Mrs. R. C. Kingston. Mr. J. Hughes, gardener to Messrs. Hart and Son, Guildford, was a good second. His most noticeable blooms were Madame Carnot, Lady Hanham, Mrs. Mease, and Charles Davis, in the Japanese section, and C. H. Curtis, Miss Annie Hills, G. Haigh, and Hanwell Glory in the incurved. Third, Mr. W. Meredith, gardener to A. Wilder, Esq., Stanstead Park, Emsworth. In the next class, that for thirty-six Japanese, not less than twenty-four varieties, there were four entries, the whole making an effective display. The first prize winner being Mr. G. Nobbs, gardener to His Majesty the King, Osborne, with good blooms of Australie, Mrs. E. Barber, Mrs. Barkley, C. Davis, Le Grand Dragon, Mrs. W. Mease, J. R. Upton, Lady Hanham, Florence Molyneux, Lady Salisbury, Mrs. J. Bryant, M. Louis Remy, and Lord Ludlow. Mr. Neville a close second, Mr. Meredith, third.

Mr. Neville won for twelve distinct incurved, with fine neat blooms of Duchess of Fife, C. H. Curtis, Pearl Palace, Chrys. Bruant, Nellie Threlfall, Miss A. Hills, Miss N. Southam, Madame Ferlat, Lady Isobel, and Ma Perfection. Mr. Hughes was a close second, and Mr. J. Wasley, gardener to J. B. Taylor, Esq., Sherfield Manor, Basingstoke, third.

For twelve distinct Japanese, amidst keen competition, Mr. L. Dawes, gardener to Mrs. Ogilvie Hambleton, secured first with medium-sized richly coloured blooms of Mons. Hoste, Edwin Molyneux, Sir H. Kitchener, Mrs. J. Bryant, Mrs. Barkley,



W. R. Church, Mrs. G. Mileham, and Pride of Madford. Second, Mr. G. Best, gardener to F. D. Leyland, Esq., The Vyne, Basingstoke, amongst his best being Miss Alice Byron, M. Louis Remy, and Mafeking Hero. Third, Mr. W. J. Privett, Frensham Place, Farnham. In the vase class, nine varieties, three of each, Mr. Wasley won with fine examples of Mrs. Barkley, Lord Ludlow, Mrs. Mease, T. Carrington, Madame G. Henri, G. W. Palmer, Australie, and Madame P. Rivoire; Mr. Meredith and Mr. Neville following closely.

For six varieties, three of each, shown also in vases, Mr. G. H. Street, gardener to the Rev. Dr. Burge, The College, Winchester, was an easy first, with good blooms of leading varieties. Mr. P. Newton, gardener, to H. H. Walford, Esq., Arlebury, Alresford, second.

Mr. W. Hunt, gardener to J. Moss, Esq., Fern Hill, Blackwater, was a successful exhibitor in the section for Japanese varieties grown without disbudding, showing fine bunches, amongst which were noticed Roi des Precoces, N. C. S. Jubilee, and V. Morel. Mr. Dawes second. The same opponents occupied similar positions for twelve bunches pompons, Mr. Hunt winning easily, with fine examples, well staged. Plants, as always at this exhibition, were a distinct feature, only one or two classes falling short of the average entries. For the best collection arranged in a space of 8ft by 7ft, quality, size of blooms, compact growth, good foliage and general appearance, Mr. G. H. Street was an easy first, with compact plants, carrying good blooms, and not too stiffly arranged. Mrs. G. Mileham, W. R. Church, Mons. C. de Leché, Alice Byron, Hooper Pearson, and Ma Perfection were particularly noteworthy. Second, Mr. R. Stone, gardener to the Ven. Archdeacon Haigh.

Decorative plants are of special interest here. For six, suitable for conservatories, grown in 9in pots, carrying not less than five blooms, Mr. G. Adams, gardener to Col. F. A. Dickens, Edge Hill, Winchester, secured first with G. W. Palmer, T. Carrington, Swanley Giant, Lady Hanham, and Mrs. Mileham, each carrying seven good blooms with good foliage. Mr. H. Grigg, gardener to Rev. R. M. Moorsom, Holyrood, Winchester, second. In a similar class for any white flowered varieties Mr. Adams was again successful, winning easily with Madame Ferlat, Miss Alice Byron, and Niveus in good form. Second, Mr. G. Cousins, gardener to E. H. Buckland, Esq., Southgate House. For six yellow flowered varieties, Mr. Adams was again the winner with Topaze Oriental, Scottish Chief, Louisa Giles, and W. H. Lincoln in splendid condition. Mr. Gigg second. Three decorative plants not grown under glass were staged by Mr. E. Yarrow, 38, North Walls, and Mr. W. J. Elkins, The Close, the two winning in the order named. Again, Mr. E. Yarrow was first for one Japanese plant untrained, James Bidencope, carrying ten fine blooms. Mr. S. Clifton, Clifton Road, second. For an untrained specimen, any variety, Mr. A. E. Taylor, Hill View Terrace, Bar End, was first with a fine plant of Mrs. Barkley. Mr. Yarrow second.

In the classes for ladies only there is always keen competition, their exhibits adding greatly to the beauty of the show. Mrs. Jeffery won for the most tastefully arranged stand of flowers, foliage, and grasses, with an exhibit very lightly arranged. Miss M. Clark, St. Cross, second. For the most tastefully arranged table, Miss Wadmore, Brook House, Basingstoke, was the successful winner, with an arrangement that left nothing to be desired. Mrs. W. Arnold, Lymington, second.

For a stand of flowering shrubs, coloured foliage, grasses, berries, &c., gathered from the open, Miss M. Clark was an easy first with a charming exhibit. Mrs. W. Arnold again second. Miss Wadmore exhibited a very beautiful basket of flowers and foliage, composed chiefly of Orchids, and was an easy first, Mrs. Jeffery second, with a good exhibit.

Fruit was well staged and good. For three bunches of Grapes, distinct, the first prize went to Mr. W. Mitchell, gardener to J. Willis Hemming, Chilworth Manor, North Stoneham, who showed fine bunches of Alicante, Muscat of Alexandria, and Mrs. Pince. Second, Mr. T. Hall, gardener to Sir S. Montague, Bart., South Stoneham House. Mr. Mitchell again won for two bunches any colour, with fine examples of Muscat of Alexandria. Mr. T. Hall was first for both dessert and kitchen Apples, three dishes of each, each exhibit being of good quality.

The best group of miscellaneous plants, arranged for effect in a space 9ft by 7ft, was a great addition to the show. The prize-winner being Mr. E. Long, gardener to F. C. Birch, Esq., Clovelly, Winchester, his exhibit being most praiseworthy. Second, Mr. H. J. Pittman, gardener to Mr. Sewell, Oakwood, Otterbourne. Primulas are also a great feature here, this year's display being quite an average one. For twelve plants Mr. Adams was first with fine examples. Second, Mr. F. A. Padwick, gardener to S. Aylward, Esq., Dingley. Mr. G. H. Street had the best six pots double flowered varieties, and Mr. F. Smith those of the single flowered section.

Vegetables were fairly good. Mr. G. Best was the most successful exhibitor in both classes, open only to Messrs. Sutton and Sons' and Toogood's customers. Mr. W. Mitchell following closely in both cases.

"Not for competition" exhibits deserve mention, being of a meritorious character. Messrs. E. Hillier and Sons, Winchester, contributed a fine collection of Apples arranged effectively, interspersed with plants, noticeable varieties being Golden Spire, The Queen, Royal Jubilee, and Peasgood's Nonesuch of the former. From Mr. G. Ellwood, gardener to the president, W. H. Myers, Esq., M.P., Swannore Park, came an attractive exhibit of Japanese Chrysanthemum blooms and foliage plants, very tastefully arranged. Mr. C. Kench, gardener to J. S. Moss, Esq., Wintershill Hall, Bishops Waltham, staged a fine collection of Orchids of high quality.

### Weston-super-Mare, November 13th.

Good weather and large attendance favoured this society for its annual show on the above date, and neither the extent of competition nor quality of individual exhibits gave cause for fault-finding. Though numerous classes are provided for trained Chrysanthemums and other decorative plants, those for cut blooms naturally enlist first interest, and here there was keen competition. For twenty-four incurved, not less than eighteen distinct varieties, there was a good entry, Mr. J. W. Drake, of Cardiff, winning in his well-known good form. His best comprised Nellie Southam, Ialene, Mrs. R. C. Kingston, C. Curtis, Louisa Giles, C. B. Whitnall, N. Threlfall, Edith Hughes, Violet Foster, Hanwell Glory, and Madame Ferlat, with the latter the certificate was gained for the premier bloom. Colonel Vivian, Rood Ashton (gardener, Mr. W. Strugnell) won second, and Messrs. W. Brooks, Weston, third. For the same number of Japanese, distinct, Mr. Drake was again first, Guy Hamilton, Mrs. Hummell, M. L. Remy, W. R. Church, Chas. Davis, Mrs. Greenfield, Matthew Smith, Mrs. Barkley, and Lord Salisbury being his best. Mr. Robertson, gardener to J. S. Donne, Esq., Castle Cary, second; T. A. Colfox, Esq., third. Mr. G. Sutton, gardener to W. A. Todd, Esq., Portishead, won with twelve varieties, Mr. Strugnell following. The premier Japanese bloom was a fine Madame A. Henri in Mr. Sutton's stand. Many miscellaneous classes for plants were provided, including groups of Chrysanthemums and stove and greenhouse plants, in which growers from Clifton, Portishead, Weston-super-Mare, and surrounding districts competed.

Fruit was very well staged. Grapes had three classes, Mr. Daffurn, gardener to Colonel Bramble, winning with Alicante and "any other variety," C. E. Whiting, Esq., staging the best white Muscats. Apples and Pears, in separate classes of four dishes and one dish respectively, brought out a spirited entry, and first-rate fruit, both in culinary and dessert classes.

Messrs. Vauces and Hortsman, joint hon. secretaries, deserve well of their patrons and competitors for the business-like tact which is brought to bear upon the work of the show, especially considering the wavering fortunes of the society's finances.

### Edinburgh, November 13th, 14th, and 15th.

This highly popular exhibition, promoted by the Scottish Horticultural Association, was held in the Waverley Market, Edinburgh, on Thursday, Friday, and Saturday of last week, and was attended with its usual success. This exhibition, held in the most spacious exhibition hall in the kingdom, is probably the largest out of London, and this season in many respects exceeded the National. The entries were not quite so numerous as they were the last year or two, but the backwardness of this season in Scotland fully accounted for this, and did not arise from any waning popularity with growers. The principal falling off was in the decorative vases for undisbudded blooms, which in Edinburgh are always a handsome show; but the lateness of the season told severely on entries, and instead of over thirty, as last year, there were only eight competitors. The great hall had an imposing appearance, gaily decorated, and laid out with Palms and other large foliage plants (specially hired for the occasion) like a huge conservatory, marvellously different from the rows of blooms on bare boards as were seen in the great vase classes in St. Stephen's Hall at the Aquarium. The weather during the show was most auspicious, and the attendance of visitors was very large on all three days, over 35,000 visitors having paid at the stiles. The gate-money amounted to £958 10s.; which does not include members' subscriptions or money from tickets sold outside in the seed shops, &c. Altogether the visitors would total up to about 42,000.

CUT BLOOMS.—The leading prize was the great vase class designated "The City of Edinburgh Victoria Memorial prize," for which the City of Edinburgh gives plate value £20 and £10 in cash. The Association adds £20 as second, £15 as third, £10 as fourth, and £5 as fifth prizes. There were seven entries, who all toed the mark, and on the whole contributed blooms of great merit, though probably not quite equal to the blooms of last season. After long and anxious scrutiny, the judges—Messrs. Molyneux and M'Hattie—awarded the premier position to Mr. Lunt, gardener, Kier, Stirling, this being the fifth year in succession that this distinguished cultivator has occupied first

position for the Edinburgh "Blue Riband." Mr. Lunt was not so clearly ahead of his rivals as he was last year, but the evenness, freshness, and high quality of his blooms carried him through. The most prominent varieties were Princess de Brancova (one of which was awarded the medal as the finest bloom in the show, and said by Mr. Molyneux to be the finest Japanese bloom seen this season), Loveliness, Mrs. S. Fryett, Edith Shrimper, Mrs. E. Hummell, C. Jarvis, Mrs. G. Mileham, J. R. Upton, M. Louis Remy, Miss Elsie Fulton, Mrs. H. Weeks, Lady Ridgway, &c. Mr. Kenyon, Woodford, Essex, was placed second with a very imposing display, which many thought, previous to the judging, might lower Mr. Lunt's colours. The blooms were very large, but wanted the fresh colour of the first prize blooms, and in several instances the third bloom of some of the varieties was very weak; close scrutiny amply justified the decision. In this stand Bessie Godfrey and W. R. Church were very prominent. Mr. Nicol, Rossie, Forgandenny, a very clever Scotch grower, was third, also with beautiful flowers, a very prominent variety being Florence Molyneux. Mr. Beisant, Castle Huntly, was fourth with good blooms, a very prominent variety being Madame Paolo Radaelli; Mr. James Martin, Corn-dean Hall, was fifth with creditable blooms. The two outclassed lots were from Mr. Mackinlay, Wrest Park, Amptill, and Mr. Johnston, Shann Castle, Ireland. The Irish blooms might have had a different fate but for being slightly injured by the journey. The Arranging Committee deserved great credit for the manner in which this class was exhibited. It was probably the most effective table of "Mums" ever seen, arranged in three tiers on a crescent-shaped table, and backed up behind with foliaged plants such as Bamboos, Palms, &c. The effect was most imposing, while a special installation of electric lights, suspended over the blooms, in the evening gave a brilliance to the exhibit which words can hardly fully describe.

Next in importance was the competition for the Scottish Challenge Cup and a first of £10, confined to Scottish growers, competitors for the previous class being debarred. The prize was for twelve vases of three blooms each, in twelve varieties. This was cleverly won by Mr. Cumming, gardener, Grandtully, Aberfeldy, and showed that even in sight of the Grampian Hills, and in a cold, sunless season, skill and attention overcomes difficulties. His varieties were Mrs. H. Weeks, Mrs. Barkley, Mons. Chenon de Leché, W. R. Church, Mrs. J. Lewis, Mrs. G. Mileham, Madame Gustave Henri, M. Louis Remy, Australie, Lady Ridgway, and Nellie Pockett. Mr. L. McLean, Greenfield, Alloa, was a good second in this class; Mr. Nicholson, Strathallan Castle, third; Mr. Kidd, Carberry Tower, fourth; and Mr. McKay, Lasswade, fifth. There were ten competitors.

There were numerous other classes for Japanese blooms in vases, and the competition was very keen. The principal class was for four vases, with six blooms in each; for this there were fifteen competitors. Mr. Lunt was again victorious with very handsome blooms, Mr. Kidd second, Mr. McLean third, and Mr. Norman, Alloa House, fourth. A strong class was for two vases of six blooms each. For this there were no fewer than eighteen competitors, the premier ticket being awarded to Mr. Baird, Arnbrae, Cambus; second, Mr. R. Whannel Drum, Greenend; third, Mr. W. Lumley, Broomhall, Dunfermline. Other classes of Japanese blooms in vases were keenly competed for. Chrysanthemums on the old-fashioned boards are not much in evidence at Edinburgh, but the prize for twelve blooms brought ten lots together, mostly of splendid quality. Here Mr. Kenyon defeated Mr. Lunt, with a stand of very fine blooms. Mr. Lunt was a very good second, and Mr. Martin a fair third. Incurred varieties were a small show, Mr. Martin being allowed a walk over for twelve blooms. For six blooms Mr. Martin was again first, and Mr. Wood, Larbert, second. For three vases, singles, Mr. D. Kidd was first, and Mr. Boucher, Cathcart, second. For the class of three vases decorative sorts, not disbudded, there were only eight competitors this season, instead of thirty last year, blooms from the terminals not being yet ready in Scotland. The first was awarded to Mr. James Middleton, St. Catherine's, Liberton.

Chrysanthemum plants were a fair show for the season, but not so good as usual, yet in all nearly 150 plants were entered. The chief class was for six plants, and with very fair specimens Mr. Michie, Boroughfield, Edinburgh, was first, and Mr. Pullman (last year's winner) second.

In the art department of Chrysanthemums the display was smaller than usual, and some things, notably bouquets, not up to the usual Edinburgh standard. The bouquets were, however, much superior to those competed with at the National, thus justifying the criticisms of an "Edinburgh Florist" at the Aquarium. Miss Geddes, Murrayfield, was first; and Mr. Fairweather, West Ferry, second. For basket of coloured foliage and berries Miss Geddes was also first, and Mr. Knight second. The competition in this class has fallen off since Croton and other variegated leaves have been allowed, instead of coloured autumn foliage, as was originally intended. The amateur classes for Chrysanthemums were not well filled, Mr. Stewart, Woodend, Alloa, and Mr. Adam Brydon, Innerleithen, dividing most of the prizes.



### Fruit Forcing.

**VINES: EARLY FORCED VINES IN POTS.**—The earliest started Vines—those set to work at the beginning of the month to afford ripe Grapes in March—will now be showing signs of growth, so that the temperature may be slightly increased, maintaining 55deg and 65deg maximum by fire heat, advancing to 75deg or more from sun heat, proportionately increasing the atmospheric moisture. The ventilation will require to be moderate, and what is given should be at the top of the house. If side ventilation be employed the cold air must be made to pass over the heated surface, so as to become warmed, for cold currents of air are extremely pernicious.

Stout, well ripened canes, with plump buds, and given a short rest, may be started now for ripening their crops of Grapes fit for table in April. The Vines require a light, airy, efficiently heated structure, such as a lean-to or three-quarter span-roof, and if hot-water pipes are at the front or side the Vines may be stood over them, on tiles or slates. These become heated and transmit some warmth to the pots, which are kept mere or less warm at the base, and the roots are not prejudiced by the heat. Besides, the tiles or slates throw off much of the water or liquid manure supplied to and escaping from the pots, so that there is no risk of a surfeit of steam, and the water running on the floor keeps up a genial moisture as well as supplying ammonia to the atmosphere when liquid manure is used. Where there are pits of about 3ft or 4ft depth, these should be utilised for supplying bottom heat by means of Oak or Beech leaves, the Vines being stood on pedestals of loose bricks, so as to raise the pots to the required height, then placing on the leaves, which produce a genial warmth and regular moisture in the early stages, and rich stimulating food when the demands of the Vines are greatest. The canes should be kept horizontally, or have the ends depressed if necessary, to insure their breaking evenly from the base upwards. The heat at the base of the pots must not exceed 70deg to 75deg, top heat 55deg, sprinkling the canes lightly twice a day, and keeping the soil moist, not wet. Black Hamburg and Foster's Seedling are most suitable for early work. White Frontignan fares well, but the fruit is small, though the quality is excellent, and Madresfield Court is one of the best forcing varieties and first-rate in both appearance and quality.

**EARLY FORCED PLANTED-OUT VINES.**—To have ripe fruit in May with certainty the house must now be closed. This more particularly applies to young and vigorous Vines, that do not, as a rule, start into growth so quickly as those that have been forced before. To produce a humid atmosphere and to economise fuel a good ridge of fermenting materials may be placed on the floor or inside border, and be turned at intervals, additions being made as the heat declines. Old Vines will not need depressing, but it is a good practice to lower them until the buds break before securing to the trellis. In the case of young Vines the canes or rods will need to be brought into a horizontal position, depressing the points, and syringing two or three times a day with water, slightly in advance of the temperature of the house. The temperature of the house may range 50deg at night, 55deg by day, and 65deg on bright days. The outside border must be protected from wet and frost by a covering of leaves and lights, or by other approved means.

**HOUSES OF THIN-SKINNED GRAPES.**—These, for table purposes, are most esteemed as long as they can be had in good condition. Black Hamburg never surfeits, Buckland Sweetwater, and Foster's Seedling seldom come wrongly, Madresfield Court is always appreciated, and Muscat of Alexandria, with Canon Hall, by universal acclaim, are held superior to all Grapes. The somewhat heavy and continued recent rains have saturated the soil and atmosphere. Air is the great secret in keeping thin-skinned Grapes, for a moderate amount of air moisture is necessary to avoid undue evaporation and consequent shrinking of the Grapes, it not being so much air moisture as a stagnant atmosphere, this causing the deposition of moisture on the berries, that is fatal to the keeping of Grapes. Slight warmth will be required in the pipes almost constantly to maintain an equable temperature, but this must not be high, or it will cause the berries to shrivel prematurely, 50deg not being exceeded by artificial means, or 5deg more for Muscat of Alexandria, ventilating freely and early in bright weather, so as to prevent moisture being condensed on the berries. The outside border will have been covered with some material to throw off the rains, glazed lights being the best, and the inside borders



are better covered with clean chopped straw, so as to prevent their cracking, and to keep down moisture likely to arise and prove injurious.—ST. ALBANS.

### Kitchen Garden.

**LIFTING RHUBARB ROOTS.**—Roots for forcing will shortly be required to be placed in heat, so that a supply of well-coloured stalks may be obtained early. Prior, however, to introducing the clumps of roots into heat it is desirable to bring them into complete rest. This is done to some extent by the lifting, but if this is supplemented by the complete exposure of the clumps to the weather, especially if frosty, an exceedingly salutary check is given, and when placed in the forcing structure they start away into growth more quickly than roots not so treated. Naturally, early varieties of Rhubarb should be selected for early use, as it is obvious such roots will start much more readily into growth. Royal Albert and Champagne are good early varieties, but those who may have a stock of roots of which they do not know the names can always pick out the best for forcing, by reason of the disposition of the crowns to swell early. Lift and prepare the roots of a good portable size. In lifting, work out a trench all round to the depth of 15in to 18in. It will then be possible to undermine the clump, which, if too large, may be divided. The fleshy roots may be cut down so as to reduce the clump to a size easily dealt with.

**SEAKALE FOR FORCING.**—The largest and strongest roots with bold crowns are the most desirable for forcing. The preparation may be made at the present time, now that the leaves have decayed down. The roots grown for the purpose of forcing may be lifted, then trim off all the side roots, and shorten the thick main root to 10in or 12in, if longer than that. The roots should be laid in ashes or soil until required. The first batch of roots may be placed in a dark structure where the temperature is kept at about 55deg. They are best surrounded with soil kept moist. Pots or boxes may also be utilised, inverting similar receptacles over them so as to exclude light.

**SEAKALE ROOTS FOR PLANTING.**—When the smaller roots, or thongs, as they are termed, are trimmed off the forcing roots, those of about the size of a small finger, and 6in in length, should be preserved for the purpose of planting in spring. It is immaterial that these should possess a crown or growing point, but the upper part of root may be cut off transversely and the lower slantingly, so as to distinguish the two. These prepared roots may be laid in soil or sand until spring, tying them together in bundles of twenty-five. The upper part of root will, in spring, form a ring of growths. The weakest of these may be rubbed off before or after the roots are planted.

**POTATOES IN STORE.**—Where Potatoes have not been stored in the best condition, it is essential that the tubers be looked over, and all that have commenced to decay or show signs of disease ought to be picked out. Dry positions must be found for the storage of the tubers, and light excluded by a covering of straw. Bags, dry and sweet, are admirable for storing Potatoes, as these may be packed one above the other if room is limited.

**SELECTING SEED POTATOES.**—If the stock of seed from the tubers in store has to be selected, this may be done when the sorting is done. Pick out the medium-sized and best-shaped tubers, free from disease. Arrange them singly in layers in boxes, which stand in a semi-light position in a cool place, but safe from frost. Of course, the whole of the stock of seed Potatoes, if the quantity is large, cannot be stored in boxes. Except for the tubers which it is intended should be sprouted and planted in this condition, the bulk may be preserved in the ordinary way, but spreading them out thinly rather than in heaps, and omitting covering, for under the action of light and air the skins become green and hardened. These tubers are excellent for planting in rames, as they push stout growths quite early if assisted with a little gentle heat.—EAST KENT.

### British State Forests.

The number of State forests in Great Britain is very limited, and I presume there are not many Crown lands that could be forested; but if the large landowners have not already set the example, they should do so without delay. I wish also to ask whether much notice has been taken by the Government of the letter which Sir Joseph Hooker addressed in October, 1873, to the Colonial Office: "The duty of conserving the natural resources of the Colonies [here referring to the destruction of forests] for the benefit of future generations is becoming the most pressing and arduous duty of those entrusted with the government." And what he advised for the Colonies, has it been acted upon at least in some degree at home?—K.



## TO CORRESPONDENTS

\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**DISEASED CARNATION LEAVES (C. C.).**—If you will kindly comply with the recognised rule of sending your name and address, which we will not publish, your questions will be considered.

**TRANSPLANTING SHRUBS (J. M.).**—All the shrubs you name will move safely at the present time if the work is carefully done. The positions should be prepared for them before the shrubs are dug up, and as much soil should be retained about the roots as possible. Any rather large bruised or broken roots should be cut off with a sharp knife.

**RIPENING THE WOOD OF PEACHES AND NECTARINES (W. T. P. H.).**—If the wood is now unripe, very little can be done this season, but you may increase the heat and admit all the air practicable day and night until the leaves show indications of falling, when the heat should be turned off. If the leaves have already commenced falling the trees must not be subjected to fire heat, but have free ventilation in favourable weather so as to induce as complete a rest as possible.

**WINTERING PETUNIAS (A. B. C.).**—We do not recognise the plant you were told was a Carnation. The Petunias should be kept near to the glass in a house from which frost is excluded, not giving more water than is sufficient to prevent the foliage from flagging. We should cut the plants back, each shoot to within a few inches of its base, and when the plants have made fresh growth an inch or two in length, shift them into pots a couple of inches larger in diameter, and by tying out the plants and supplying with liquid manure after the pots are filled with roots, the plants will grow rapidly, and, if kept near to the glass and the house well ventilated they will flower freely. The shoots removed may be put in as cuttings, and if kept moist they root safely in a greenhouse, flowering more freely than plants from seed.

**INSECTS ON APPLE TREES (L. K. M.).**—The twigs are infested with the black aphid, which may be destroyed with a solution of Gishurst compound, a strength of 3oz to a gallon of water, applied with a syringe. A fluid ounce of paraffin well mixed in a gallon of water, and similarly applied, squirting a syringe of the paraffin water alternately in the vessel and on the trees, will also destroy the insects and not injure the wood of the trees. The swelling of the spurs of the Pear tree you have sent are quite natural, but the wood does not appear to be quite healthy. Does your garden require draining? The rusting and cracking of the fruit is attributable to inclement weather when the fruit was in a small state. Very wet clayey soils and poor dry sandy soils also contribute to the cracking of fruit, which does not receive the support necessary for healthy progressive growth.

**CHRYSANTHEMUMS AFTER FLOWERING (Rector).**—They may be wintered in a cold pit or frame, cutting them down as soon as the flowers have faded. The young shoots should be taken off with a small portion of root stem, and may be inserted singly in small pots, or three around the sides of a 3in pot; and the pots being placed on ashes in a cold frame, the cuttings will root slowly but surely, keeping them moist, affording slight shade when the sun is bright, and keep them rather close until rooted. They should be transferred to larger pots when the cutting pots are filled with roots, taking out the point of each shoot when about 4in to 6in in length. The old plants, if you wish to keep them another year, may be turned out of the pots, removing all the old soil, cutting the roots back, and repot in 5in or 6in pots.

**VINES IN NARROW BORDERS (G. A. S.).**—You may grow Grapes of good quality, though you are only able to make a border 2ft in width. You will need to put in 6in of rubble for drainage, and over it a layer of turves, grass side downwards. The loam being of a tenacious nature, add to it one-sixth of old mortar rubbish and a twelfth part of  $\frac{1}{2}$ in bones, incorporating thoroughly. The compost should be applied in a rather dry state and made firm. As to the cubic feet of soil to allow to each Vine, that depends on the space the Vines are to occupy. Vines in pots with 8ft of rod succeed in pots containing less than 3ft (cubic) of soil; but we should make the border as large as practicable, allowing at least 12ft to each Vine, and as much

more as you can. It will be necessary to water them liberally with liquid manure when growing. They should be planted when they have commenced growing or when the shoots are about an inch long. Black Hamburg is most suitable, and a good white companion is Foster's Seedling.

**NAMES OF FRUITS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (B. W. Y.).—1, Beauty of Hants; 2, Blenheim Orange; 3, Boston Russet; 4, a local variety, not recognised; 5, Fearn's Pippin; 6, Carraway Russet.

**NAMES OF PLANTS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (J. B. B.).—1, The correct name is *Cypripedium insigne* Sander; 2, *Cypripedium Curtisii*; 3, a form of *Cypripedium Goweri magnificum*; 4, *Oncidium varicosum*; 5, *Dendrobium Wardianum*. (F. T.).—*Desfontainea spinosa*. (M. N.).—Probably the Tea Rose, *Souvenir d'un Ami*, somewhat deep toned. (F. T.).—1, *Garrya elliptica*; 2, *Eupatorium odoratum*; 3, *Cryptomeria elegans*; 4, *Cotoneaster frigida*; 5, *Cotoneaster horizontalis*; 6, *Ceanothus Gloire de Versailles*.

## Covent Garden Market.—November 19th.

### Average Wholesale Prices.—Fruit.

|                           | s. d. | s. d. |                                | s. d. | s. d. |
|---------------------------|-------|-------|--------------------------------|-------|-------|
| Apples, Blenheims, bush.  | 7 0   | 10 0  | Grapes, Muscat ...             | 2 0   | 3 0   |
| „ culinary, bush.         | 3 0   | 6 0   | Grapes, Alicante ...           | 0 9   | 2 0   |
| „ King Pippins, ½-sieve   | 5 0   | 6 0   | „ Colman ...                   | 0 9   | 2 0   |
| „ Cox O. Pippins, ½-sieve | 0 0   | 10 0  | Lemons, Naples, ease           | 20 0  | 25 0  |
| Bananas ...               | 8 0   | 12 0  | Oranges, ease ...              | 10 0  | 20 0  |
| Cobs and Filberts, lb.    | 0 4½  | 0 0   | Pears, dessert, ½-sieve        | 3 0   | 6 0   |
| Figs, green, doz.         | 2 0   | 4 0   | „ stewing, ½-sieve             | 2 6   | 3 6   |
|                           |       |       | Pines, St. Michael's, each ... | 2 6   | 5 0   |
|                           |       |       | Plums, ½-sieve ...             | 0 0   | 0 0   |

### Average Wholesale Prices.—Vegetables.

|                               | s. d. | s. d. |                        | s. d. | s. d. |
|-------------------------------|-------|-------|------------------------|-------|-------|
| Artichokes, green, doz.       | 2 0   | 3 0   | Horseradish, bunch ... | 2 6   | 0 0   |
| „ Jerusalem, sieve            | 1 6   | 0 0   | Leeks, bunch ...       | 0 1½  | 0 2   |
| Batavia, doz. ...             | 2 0   | 0 0   | Lettuce, Cabbage, doz. | 0 6   | 0 9   |
| Beet, red, doz. ...           | 0 6   | 0 0   | Mushrooms, forced, lb. | 1 0   | 0 0   |
| Brussels Sprouts, ½-sieve ... | 1 6   | 2 0   | Mustard & Cress, pnt.  | 0 2   | 0 0   |
| Cabbages, tally ...           | 3 0   | 0 0   | Onions, bushel ...     | 3 0   | 4 0   |
| Carrots, new, bun.            | 0 2   | 0 0   | Parsley, doz. bunchs.  | 2 0   | 0 0   |
| Cauliflowers, doz.            | 1 6   | 0 0   | Potatoes, ewt. ...     | 3 0   | 5 0   |
| Corn Salad, strike            | 1 0   | 1 3   | Spinishes, doz. ...    | 1 0   | 0 0   |
| Cucumbers doz. ...            | 0 0   | 4 0   | Spinaeh, bush. ...     | 2 0   | 2 6   |
| Endive, doz. ...              | 1 6   | 0 0   | Tomatoes, English, lb. | 0 5   | 0 6   |
| Herbs, bunch ...              | 0 2   | 0 0   | „ Jersey ...           | 0 0   | 0 4   |
|                               |       |       | Turnips, bnch. ...     | 0 3   |       |

### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                                | s. d. | s. d. |                                   | s. d. | s. d. |
|--------------------------------|-------|-------|-----------------------------------|-------|-------|
| Aralias, doz. ...              | 5 0   | 12 0  | Ficus elastica, doz. ...          | 9 0   | 12 0  |
| Araucaria, doz. ...            | 12 0  | 30 0  | Foliage plants, var, each         | 1 0   | 5 0   |
| Aspidistra, doz. ...           | 18 0  | 36 0  | Grevilleas, 48's, doz. ...        | 5 0   | 0 0   |
| Chrysanthemums ...             | 6 0   | 12 0  | Lycopodiums, doz. ...             | 3 0   | 0 0   |
| Crotons, doz. ...              | 18 0  | 30 0  | Marguerite Daisy, doz.            | 4 0   | 6 0   |
| Cyperus alternifolius doz. ... | 4 0   | 5 0   | Myrtles, doz. ...                 | 6 0   | 9 6   |
| Draeana, var., doz. ...        | 12 0  | 30 0  | Palms, in var., doz. ...          | 15 0  | 30 0  |
| „ viridis, doz. ...            | 9 0   | 18 0  | „ specimens ...                   | 21 0  | 63 0  |
| Erica graealis ...             | 8 0   | 9 0   | Pandanus Veitchei, 48's, doz. ... | 24 0  | 30 0  |
| „ hyemalis ...                 | 10 0  | 12 0  | Primulas ...                      | 4 0   | 5 0   |
| „ Caffra ...                   | 12 0  | 15 0  | Shrubs, in pots ...               | 4 0   | 6 0   |
| Ferns, var., doz. ...          | 4 0   | 18 0  | Solanums ...                      | 5 0   | 8 0   |
| „ small, 100 ...               | 10 0  | 16 0  |                                   |       |       |

### Average Wholesale Prices.—Cut Flowers

|                                       | s. d. | s. d. |                                      | s. d. | s. d. |
|---------------------------------------|-------|-------|--------------------------------------|-------|-------|
| Arums, doz. ...                       | 4 0   | 0 0   | Lily of Valley, 12 bunchs            | 9 0   | 18 0  |
| Asparagus, Fern, bnch.                | 1 0   | 2 0   | Maidenhair Fern, doz. bunchs. ...    | 5 0   | 6 0   |
| Bouvardia, coloured, doz. bunches ... | 6 0   | 8 0   | Marguerites, white, doz. bunchs. ... | 3 0   | 4 0   |
| Carnations, 12 blooms                 | 1 3   | 1 9   | „ yellow, doz. bunchs.               | 1 6   | 2 0   |
| Cattleyas, doz. ...                   | 9 0   | 10 0  | Myrtle, English, per bunch ...       | 0 6   | 0 3   |
| Chrysanthemums, doz. bun.             | 3 0   | 6 0   | Odontoglossums ...                   | 4 0   | 5 0   |
| „ doz. blooms                         | 1 0   | 4 0   | Orange blossom, bunch                | 2 0   | 0 0   |
| Croton foliage, bun. ...              | 0 9   | 1 0   | Roses, Niphetos, white, doz. ...     | 1 6   | 2 6   |
| Cyca leaves, each ...                 | 0 9   | 1 6   | „ pink, doz. ...                     | 2 0   | 3 0   |
| Cypripediums, doz. ...                | 2 0   | 3 0   | „ yellow, doz. (Perles)              | 1 6   | 3 0   |
| Eucharis, doz. ...                    | 3 0   | 0 0   | „ Generals ...                       | 0 6   | 1 0   |
| Gardenias, doz. ...                   | 2 6   | 3 0   | Smilax, bunch ...                    | 2 6   | 0 0   |
| Geranium, scarlet, doz. bunchs. ...   | 4 0   | 5 0   | Stephanotis, doz. pips               | 0 0   | 3 0   |
| Ivy leaves, doz. bun. ...             | 1 6   | 0 0   | Tuberose, dozen ...                  | 0 9   | 1 0   |
| Lilium Harrisii ...                   | 3 0   | 4 0   | Violets, doz. bun. ...               | 1 0   | 1 6   |
| „ lanceifolium alb.                   | 1 6   | 2 0   | „ Marie Louise ...                   | 3 0   | 4 0   |
| „ l. rubrum ...                       | 2 0   | 0 0   |                                      |       |       |
| „ longiflorum ...                     | 3 0   | 4 0   |                                      |       |       |

## Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.                  | Direction of<br>Wind. | Temperature of the<br>Air. |              |              |              | Rain.          | Temperature of<br>the Soil.<br>At 9 A.M. |                      |                      | Lowest<br>Temperature<br>on Grass. |
|------------------------|-----------------------|----------------------------|--------------|--------------|--------------|----------------|--|----------------------|----------------------|------------------------------------|
| 1902.<br><br>November. |                       | At 9 A.M.                  |              | Day.         | Night        |                | At<br>1-ft.<br>deep.                     | At<br>2-ft.<br>deep. | At<br>4-ft.<br>deep. |                                    |
|                        |                       | Dry<br>Bulb.               | Wet<br>Bulb. | Highest.     | Lowest.      |                |  |                      |                      |                                    |
|                        |                       |                            |              |              |              |                |  |                      |                      |                                    |
| Sunday ... 9           | S.S.W.                | deg.<br>49.6               | deg.<br>46.1 | deg.<br>54.3 | deg.<br>45.0 | Ins.<br>—      | deg.<br>43.2                             | deg.<br>50.5         | deg.<br>51.9         | deg.<br>37.5                       |
| Monday ... 10          | S.W.                  | 45.9                       | 45.1         | 53.1         | 41.8         | 0.03           | 47.7                                     | 50.2                 | 51.8                 | 33.0                               |
| Tuesday ... 11         | S.E.                  | 47.5                       | 44.9         | 58.0         | 45.0         | 0.03           | 47.3                                     | 50.0                 | 51.8                 | 30.3                               |
| Wed'sday 12            | S.W.                  | 50.7                       | 49.0         | 55.8         | 47.0         | —              | 48.7                                     | 49.9                 | 51.7                 | 44.8                               |
| Thursday 13            | E.S.E.                | 34.7                       | 34.3         | 55.6         | 31.3         | —              | 46.5                                     | 49.9                 | 51.5                 | 23.1                               |
| Friday ... 14          | S.E.                  | 39.9                       | 39.4         | 53.4         | 34.0         | —              | 45.0                                     | 49.2                 | 51.4                 | 27.0                               |
| Saturday 15            | E.S.E.                | 44.1                       | 42.6         | 50.4         | 39.5         | —              | 46.2                                     | 48.8                 | 51.3                 | 31.3                               |
| MEANS ...              |                       | 44.8                       | 43.1         | 54.5         | 40.5         | Total.<br>0.06 | 47.1                                     | 49.8                 | 51.6                 | 32.4                               |

A week of dull dark weather, with thick fog on three days.

## Trade Catalogues Received.

Geo. Cooling and Sons, The Nurseries, Bath.—*Roses, Fruit Trees, Shrubs, &c.*

John Forbes, Hawick, Scotland.—*Trees, Shrubs, Fruit Trees, Strawberry, &c.*

Catalogue de la Carrosaccia Horticultural Establishment, Ajaccio Corsica, for the season 1902—1903.



## Milk? Butter? Cheese?

We have often noticed, and no doubt our readers have done so too, that just after the big Dairy Show held in London in the autumn, all the farming papers seem much alive to the milk and butter questions. All the old questions are brought up and rediscussed, and sometimes a new one of great import is presented for consideration, and then we all settle down once more into a pleasant, drowsy state with folded hands. Again, too, milk-dealers usually make two contracts in the year, and about the time of the show they have settled, or are about to settle, the price of their milk for the six winter or cold weather months. That a great many farmers have gone into milk selling is more and more apparent, that is in contradistinction to butter-making, and the reason really is not far to seek. As someone observed the other day, England is gradually becoming one vast residential country, and the towns are encroaching upon the suburbs, and the suburbs hardly know a limit, and this population, which is yearly becoming better educated, i.e., more sensibly as regards sanitary or health measures, desires to be fed on milk, or at least to give to milk a prominent place in the dietary table. Hence these are the customers, and the British farmer is wide enough awake to see his opportunity and supply them. So, tiresome and worrying as at times the milk trade is—it will, we believe, continue to grow. It has received many checks at times, such as the high price of feeding stuffs, the scarcity of pasture, the difficulty of collecting accounts, the harassment from railway companies, the sanitary inspectors, and, lastly, this new milk standard business. There is one thing about a deal in milk, once cooled and delivered to the station, the work of milk manipulation is over, whereas if the same milk be taken into the farm dairy



and there in process of time be turned into butter, there is much to be done in the way of actual hard work, and more time is spent before it is ready for the consumer. We do not shirk hard work or we should not farm at all, but if we give of our best in the form of work, we are at any rate entitled to a suitable return. The fact is that farmers as a body have been giving out in many instances more than they received, hence the disasters which have overtaken so many.

Now the question that has been debated lately with great ability in the pages of "The Agricultural Gazette" is this: "Is it better to sell milk or to sell butter?" It is a wide question, and one which must be closely examined before a final opinion is arrived at. We think the great question to be considered is the one of locality, and even then, perhaps, there is less difference here than one would expect. Of course the price of butter per lb. does vary to a certain extent, but nowhere is it so very high. On farms in remote districts we could hardly advise milk selling on account of the expense in conveyance to a station—motors may alter this—and, therefore the milk must be disposed of in the condensed form of butter or cheese, certainly the latter if possible. Perhaps some readers hardly realise that there are still farms ten miles or so from a station, and equally remote from large centres of population. But about milk selling. At Islington the milk is carefully measured and assessed at a certain price, say 9d. per gallon. That milk is afterwards turned into butter and valued in that form, and the result is published. Now it must be borne in mind that the animals which produce this milk are show animals; therefore we will suppose about as good as any that can be found. They have been selected for their dairy properties and carefully fed, and all the tests are carried out by experienced men, and with the greatest exactitude. These are some of the figures, and they are well worth study:—

There is a pedigree Shorthorn belonging to Mr. Merry which yielded in twenty-four hours  $5\frac{2}{3}$  gallons of milk which, valued at 9d. per gallon, would be equal to 4s. 3d. She is considered to have done well in the butter test, as that quantity of milk ( $5\frac{2}{3}$  gallons) made  $2\frac{3}{4}$  lb of butter, which, at 1s. 6d. per lb would be a trifle under 4s. Then we come to a cow of Mr. George Long's—Red Queen—who, by-the-by, won the first prize in her own class for Shorthorns not eligible for the herd book, also won Barham's Challenge Cup and the Lord Mayor's Cup for the best milking Shorthorn. Her milk record was somewhat over 7 gallons per day, but the butter that was produced from her milk only could be valued at a fraction over 3s.

Then we come to a Jersey belonging to the Bishop of Ipswich, whose daily yield of milk was  $4\frac{1}{4}$  gallons, and whose butter produce was  $2\frac{1}{2}$  lb—thus setting as butter money 3s. 9d. per day as against milk money 3s. 2d. Then, again, the same paper (date October 20) makes mention of ten Shorthorns who were either prizetakers or highly commended in the butter tests—picked cows again, mark. In one day their united milk yield was 53 gallons milk, £1 19s. 9d., as against 22lb butter, £1 13s. We do not quarrel with the price at which the milk is rated, viz., 9d. per gallon, but we do very much disagree with the 1s. 6d. per lb charged for butter. We have been good butter-makers for many years, and we have very seldom realised 1s. 6d. per lb save for an odd week or two in the depth of winter. Our average has been much nearer 1s., or perhaps a fraction under, to be nearer the truth. With these facts and figures before us how can we advocate butter-making as a paying industry? We know it is said that the value of the skim-milk and butter-milk makes the total add up a bit better, but even then, unless the price put on those bye products is very much above the market value, there can be no comparison. Possibly now old milk as pig food is at its highest market in value, but pigs surely will not always remain at the famine prices they have now touched. As we have practically given up Wheat growing from a baker's point of view, we shall give up butter culture and devote our cows to stock rearing, milk selling, or cheese making, the value of the latter, we see, being on the up grade.

When we come back to butter making and cheese manufacture we at once pile on the cost of production. One writer says butter is composed of four ingredients, viz., time, muscles, brain, and animal fat, and when it is considered that the price of butter will range from 6d. to 1s. 6d., there is little encouragement to us to try and take

the trade out of the hands of Danish farmers, or, perhaps more properly, factory companies. We know one friend who, with a herd of Jerseys, and with a market in one of the home counties, and whose butter was really of the gilt-edged variety, and practically he could and did pick his customers, has, in consideration of his pocket, gracefully retired from the struggle after some two-and-a-half years' trial. We should like to impress upon our readers once again the fact that, taking the ordinary farmer's cows and allowing them to be good milkers of a non-pedigree strain, it is very very seldom indeed that they can produce 1lb of butter from less than 3 gallons of milk—there may be, and of course are, exceptions to this, but the general rule is 3 gallons—1lb butter. There is another point where a little profit may be made out of the milk trade; this is where the milk is delivered by the farmer himself to his customers. He is not a pushing business man if he cannot, along with the milk, make a trade for eggs, fowls, curd, Potatoes, and other small wares; things on which there is always a bit of profit to be had provided there are no intermediate channels. He will also be looked to if an extra supply of cream is needed, and he may also be able to make a demand for choice fruit and flowers. The milk dealer is always in trouble with his customers, and as a rule settles accounts weekly (there is a very great advantage here).

The idea that has long existed that certain cheeses can only be made in certain localities must now be abandoned. When we see that four out of the five great prizes for Cheddar went to Scotland this year we must acknowledge that technical skill has as much to do with successful cheese making as the situation of the pastures or class of cattle. We may look, again, at some of the Canadian cheeses, which are perfect reproductions of our best makers. But without good sound technical knowledge no one should enter on the calling of cheese making. It is hard work, and for many months in the year constant work. There are many fancy cheeses which meet a ready market, indeed we might say a steadily growing market; and we should almost be inclined to advise that some of these newer varieties should receive a little more attention at the hands of those farmers who are tired of the butter and milk trade.

### Work on the Home Farm.

The Swedes are still growing. We have had a heavy rain, and Swede-pulling could not have been done with any comfort to the men. The dressing and weighing of Barley and Wheat has found plenty of occupation for men and delivery to the station for the horses. This putting on rails from a distance of four and a half miles is slow work. If there were no undue delays two journeys per diem could be managed even in one of these fast shortening days, but, alas! delays at the station are the rule and not the exception. The staff at these country stations is a small one, and can render little assistance at any time, but now that threshing machines are putting in full time everywhere, so much grain is being marketed, that no official help in loading can be looked for, and we have to send an extra man. But that does not prevent delay, though it helps to minimise it. There is often such a block that the waggon cannot be got near the railway truck until others have unloaded and departed. But the most aggravating delay of all is that caused by shunting operations. It frequently occurs that when there are but few sacks left in the waggon, a pick-up train arrives, and immediately removes all the trucks from the siding to sort out loaded ones, and as shunting is never hurried, an hour or more may elapse before the waggon can again be got to the truck-side. No wonder waggoners are addicted to strong language. We want the steam cultivator to plough some ley for Potatoes, but it is deeply engaged for the present, so we shall have to wait. The late harvest has caused a big demand for the use of cultivators on fallows. The ram must be separated from the ewes now, and the latter may be allowed to consume the Mangold tops; as there is likely to be plenty of other keeping; we should prefer to plough them in. They are worth more as manure than as food. The ewes will be best kept on grass or seeds at present; they are better without many Turnips until nearer Christmas, but they must not be put on very low-lying wet pastures until there has been a decided frost. The very mild autumn has been most favourable to the breeding of that dreadful pest, the liver fluke. A plentiful supply of rock salt might prevent the absorption of the embryo fluke, but would not kill it when once acquired by the system.

A swampy place sometimes causes an attack of fluke in what is otherwise a dry field. If a good dressing of agricultural salt were sown on the swampy place in July it would be an excellent preventive.

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CRADLEY, near MALVERN.**



## Journal of Horticulture.

THURSDAY, NOVEMBER 27, 1902.

### Soils: Their Treatment.

**N**OTWITHSTANDING all that has been written on the above subject, there is in actual practice much diversity in the methods adopted by different cultivators, and although each may secure good results by following practices widely opposed to each other, there must still be a practice, though not always the same one, which is the most suitable for each set of circumstances; and the aim of all cultivators should be to pursue a course which proves to be both efficient and economical. Hosts of cultivators have proved by experience the value of throwing up a stiff soil roughly during the autumn or early winter, because under the action of frost, rain, and drying winds, a soil so treated will crumble to dust by the spring, when, with a little surface culture, it is quickly brought into a suitable condition for sowing or planting.

This pulverising influence of frost is made clear by the light of science, which shows that between each particle of soil there is a tiny drop of water, which, under the influence of frost, expands, and thus forces the particles of soil further apart. When the thaw takes place, and the ice is again converted into water, there is a shrinkage, and air rushes in to fill up the vacuum. As the moisture dries out, more air is admitted, this in turn being again displaced by water, and thus the continual expansion and contraction going on works in a silent way a mighty wonder with Mother Earth.

If, then, the practice of throwing up a stiff soil roughly during the autumn tends to pulverise and bring it into a finely divided state, it is obvious that a similar practice is not the best one for a very light soil, because the object of the cultivator in the latter case

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should be to make it closer in texture, and thus more capable of holding the food of crops. Notwithstanding the above facts, there are, however, some able cultivators who practise, and strongly recommend to others, a course of procedure diametrically opposed to that outlined above. They say that it is only light soils that should be dug during autumn; the heavy ones they prefer to dig or trench just before planting is done in spring; advancing as their reason for such a practice that the freshly turned up heavy soil dries quicker, and is ready for sowing or planting at an earlier date than that thrown up in the autumn.

There is a good deal of truth in this assertion, and if it was only a question of getting the soil dry quickly some advantage might be claimed for late digging; but here the crux of the whole matter comes in, because by allowing a stiff soil to lie undisturbed till spring the influence of frost as a pulverising agent is entirely neglected. A stiff soil thrown up roughly in the autumn absorbs and retains a great amount of moisture, and the greater amount it retains the more beneficial will be the action of frost upon it. The surface may take a few days longer to dry in spring than in the case of a soil recently dug, but when the former is dry it crumbles to a fine powder, and a little hoeing and forking soon brings it into a fine condition of tilth.

Matters are far different with the spring-dug, stiff soil. After being turned up, the lumps dry quickly, but as no pulverising influence has been at work, the crumbling condition is entirely absent. The lumps when broken up are still lumps, though smaller in size, because the particles of soil have not been forced apart. In such a soil the tender roots of seeds are unable to work freely, and although after a time it crumbles on the surface under the influence of weather, that influence is only exerted to the depth of an inch or so, and the mechanical condition of the soil, instead of being improved each year, remains stationary.

In conjunction with this autumn cultivation, if the manure applied is used in a rough, fresh, undecayed condition better results are obtained on a stiff soil than when well rotted manure is employed. But in the case of light soils dug in spring, the manure should, of course, be thoroughly decayed, or if not the rougher portions ought to be removed. The old practice of burning the surface of a stiff soil is perhaps the quickest method of all in bringing it into a good working condition; but unfortunately it is not often practised now on account of the expense and the general scarcity of labour. Liberal application of lime or soot will also do much toward bringing about the amelioration of a stiff soil, in addition to supplying essential plant foods.

In regard to the best methods to adopt in trenching soils, there are still not a few misleading statements advanced by men who claim that such ideas have been forced upon them by the result of their own experience. Let us examine one of those ideas, and see how misleading it may become if advanced for general acceptance.

A prominent cultivator may be noted for the excellence of his vegetables, or crops generally. He attributes his success to the systematic practice of trenching, and in talking or writing of trenching advises that when that operation is performed the position of the soil should be reversed—burying the surface soil, and bringing that from beneath to the top; and if a word is said against the practice, points to the results he obtains by following it, quite ignoring the fact that a practice which may be right in his case would mean disaster if followed under other circumstances. Land which has been well manured for years, and trenched at regular intervals, after a time becomes very uniform in character from top to bottom. Then if at trenching time the position of the soil is reversed during the operation it gets considerably "mixed," and that brought up from below being fully charged with plant food, is improved by full exposure to the atmosphere, and the practice of continually reversing such soils brings them into that condition in which almost anything will grow in any portion of the soil down to the cultivated point.

Now, let us turn to the other side of the question. How could anyone more easily court disaster than by attempting this reversal of soil on land which had not previously been trenched, and which, although good on the top, is poor, sandy, gravelly, or stony beneath? Such a soil is, of course, immensely benefited by being trenched and heavily manured,

provided the inferior soil is kept beneath and the good on the top.

After a few years in a case of this description a little of the soil in the second strata may be mixed with that immediately above it, and thus by degrees the whole is improved to a great depth; but it is slow work, and the man who attempts to improve it at one bold stroke lays a "lash" on his own back which will cut deeply, and provide "stinging pin-pricks" for years after the "stroke" is driven home.—H. D.

## The Horticultural Hall.

Some of the plans for the Royal Horticultural Society's Centenary Hall are furnished on page 504, and these afford information of the selection, disposition, and sizes of the various offices and rooms, and of the exhibition hall. On the ground floor plan we observe that the site extends in front, facing St. Vincent's Square, to a length of 150ft, while the sides are almost 130ft.

This space would seem to be sufficiently extensive for the purpose of a suitable exhibition hall with offices for the fortnightly meetings of the Royal Horticultural Society and of the London special floricultural societies, but the question has arisen whether the best use has been made of the space. Three distinct committee rooms are provided on the first floor. Plants and objects for the respective committees will therefore, we presume, require to be carried up one storey, and down again, necessitating the expenditure of much time and energy. Might not the annexes of the exhibition hall have been utilised as places for the committee meetings, the duration of which is seldom longer than one hour in each fortnight?

This would have freed three rooms, or the space of the same, to be placed at the option of the Gardeners' Royal Benevolent Institution and the Royal Gardeners' Orphan Fund, with one room for the occasional meetings of the committees of the floricultural societies, each contributing a small rent for the use thereof. Failing the acceptance of these societies of the rooms, a club room would surely have been welcome. This would then appear like the true Home of Horticulture for which so many have been waiting, and become a source of revenue to the Council.

The external appearance of the hall, as shown in the plans approved by the Council, is such as to excite some feeling of alarm that this projected building may be sanctioned and completed without alteration, and stand for ages as an everlasting cause of lamentation to all who are lovers of the stately or elegant in architecture. Inasmuch as space is limited, every effort of the Council should be directed toward increasing the utilisable area in the basement, and creating more space in the roof. By the addition of a five-foot parapet, the attics of the hall could most easily be converted into a domed or skylighted museum, by which the outward semblance of the building would be completely revolutionised and beautified.

A museum appeals to us imperatively as an indispensable adjunct of a Royal Horticultural Hall. It may be said that a society distinguished by the possession of a Scientific Committee would find itself lacking in dignity if it could not also boast of a museum in which objects of interest characteristic of the deliberations of such a body might be accumulated. It is quite conceivable that hereafter the labours of this Committee will result in an accession to the Society of models relating to fruit, specimens of plant diseases or of injurious insects, and other interesting objects transmitted by enthusiastic Fellows during their migrations in foreign lands. In case the glazed and vaulted chambers on each side of the caretaker's apartments remain unused as a museum, it will not be difficult to find some other purpose for them, and the present unsightly roof of slate would disappear.

### Apple, Coronation.

We learn that the Apple named originally Edward's Coronation is hereafter to be named simply Coronation.

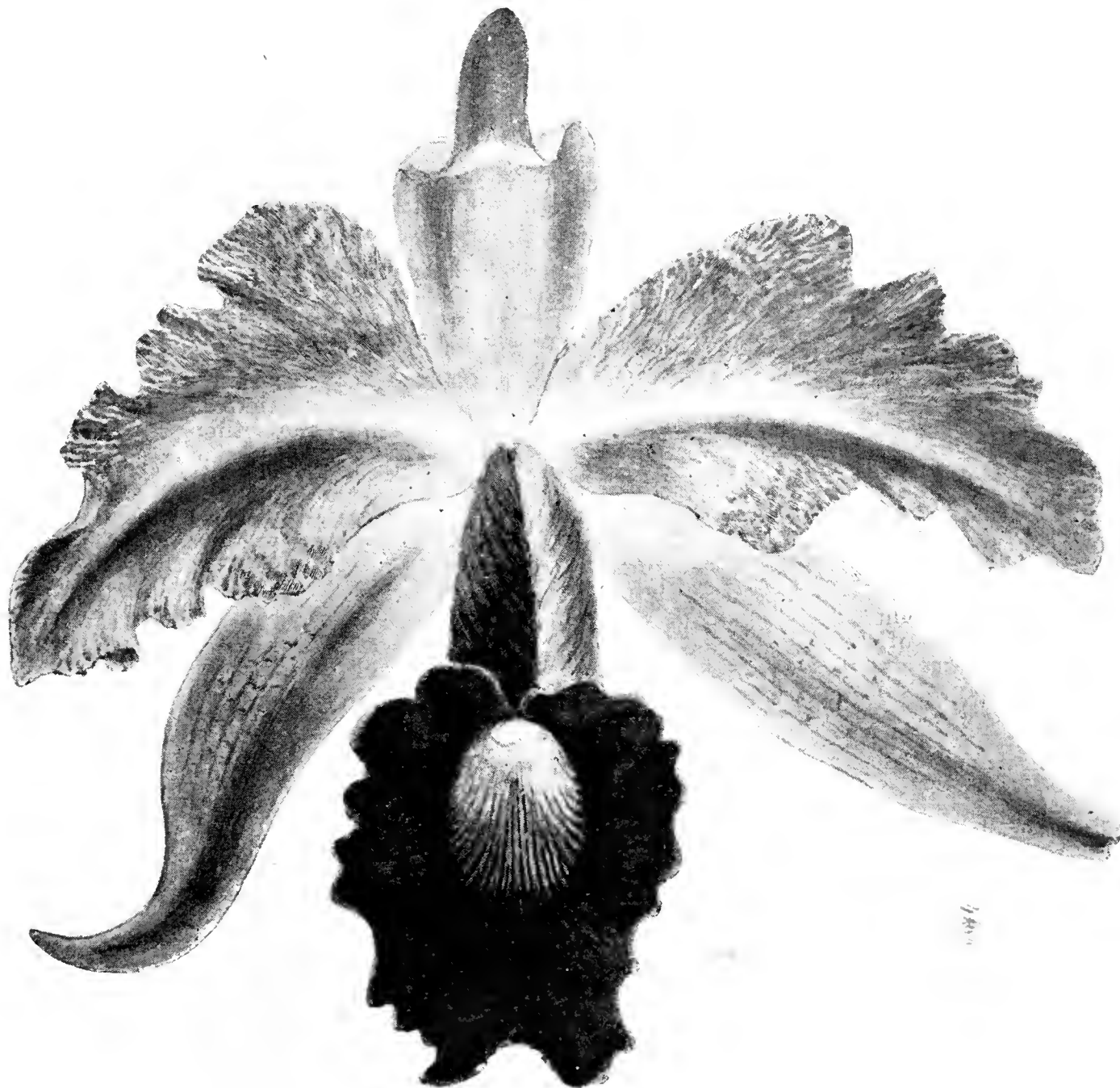


**Lælio-Cattleya × Bletchleyensis, Fowler's variety.**

This magnificent form was exhibited before the Orchid Committee of the Royal Horticultural Society on October 21, from the Treasurer to the Society, and received a First Class Certificate. Mr. Geo. Shayler's drawing below represents the natural size of the flowers. The sepals and petals are beautifully tinged

But with the best care some plants will suffer. The lovely *Phalenopsis* and the showy *Calanthes* are, perhaps, the most liable. The double roofed houses in vogue some years ago did little to check the damage, and it seems useless to try and prevent it. Any choice specimens or unflowered plants from which much is expected may have the shelter of a handlight in the house, a precaution that may, when the fog is of short duration, in some cases save the flowers. A dry state of the compost is of course beneficial, but this cannot always be arranged, as one is often tempted to water the plants on a bright sunny day, and the next morning may prove foggy.

Speaking of *Calanthes*, these useful and beautiful winter flowering Orchids are often injured by being stood about in cold, draughty corridors and conservatories while in bloom. They are natives of tropical countries, and cannot stand this treatment;



**Lælio-Cattleya × Bletchleyensis, Fowler's variety.**

and veined with rose-purple; while the lip is of a dark ruby-red tint, with lighter purplish margin.

#### The Week's Cultural Notes.

While all growers of Orchids are very much at the mercy of the weather, those residing within the metropolitan area, or within the vicinity of large towns, are seriously troubled with fog at this season of the year. I may as well admit that I have no panacea for the ills that Orchids suffer by this cause; but I have found that in many cases the injury done to the plants has been much worse when a very damp atmosphere has been kept up, and no attempt made to create a proper air circulation by means of gentle heat on the pipes and judicious use of the ventilators.

consequently, though no harm is apparent to the eye, the plants are checked and start weakly, and do badly in consequence. Moderately dry and warm conditions, without any moisture in the soil after the last leaf falls, is what they like, and opposite treatment is sure to be detrimental.

That beautiful cool house Orchid, *Disa grandiflora*, and its allies, are now growing freely, and should be encouraged. To dry it now is to weaken the young growth and cause it to be flowerless. It also tends to insect attacks. Should any of the later specimens appear to need more room, there is still ample time to repot; but should young roots be present use great care not to damage them. Offshoots potted up now stand a good chance of growing into flowering specimens; but no more time must be lost.—H. R. R.





### Wasps in Winter.

Yesterday, the 23rd inst., I was passing a spot in a meadow where in summer I found myself standing on the entrance to a strong colony of wasps, and soon found out the reason of so many around me requiring to obtain admission to the nest. The hole was covered with Oak leaves, and I brushed them away, and with the aid of a strong stake from the hedge I worked away the soil a good distance round, and took out the nest complete, about the size of an ordinary football. I was surprised to find still a large quantity of ordinary workers in the nest somewhat benumbed from cold and wet, but on being placed in a newspaper they by degrees assumed their normal character and flew away, but did not attack me as would have been the case earlier in the season. I did not notice any queens or male wasps, which have no doubt deserted their home, the queens no doubt hibernating in the vicinity. I find that their favourite resort for winter quarters is under dead bark on trees, sufficiently loose to crawl under. I found about a dozen on a tree some five or six weeks ago, and on the same tree last winter a youth killed about two dozen. On another tree I took about a score of queens from under loose bark.—JAMES HAM, Astwood Bank.

### Illegal Showing.

It will surely seem pretty plain to most readers of the Journal what is to be done to stop the dishonest practices of which "A Yorkshire Grower" complains, page 472. In most cases of fraud the difficulty is to catch the perpetrator; but there is rarely any trouble in knowing how to deal with him when caught. Now, two or three such people "A Yorkshire Grower" actually knows of, and of course he is prepared to prove it, or he would not say so. Well, it will seem to a good many of us "living down South" that if he does not expose these persons and bring them to justice a considerable and weighty responsibility at least will lie upon him. He thinks "the time has come when all such practices should be put a stop to"; but, according to his letter, he ought to have thought so for a year or so at least. This is not the first time that exhibitors "living down South" have heard whispers of lax proceedings in the North, and even that they are winked at and condoned. Indeed it is, as was the case with an example brought before the Journal some time ago, entirely a matter of schedule. Each show or society makes its own laws and rules, and it is impossible for any outsider to dogmatise about law-breaking till he knows what the rules, written or unwritten, may be. But if anyone knows of, and is able to prove, any showing which is illegal and contrary to the rules, it seems odd that he should have any doubt about what his duty may be.—W. R. RAILLEM.

### A Dissertation on Pears.

At the recent exhibition of the National Chrysanthemum Society it was a great pleasure to note how well-filled were the three classes for hardy fruits. Perhaps when the Royal Horticultural Society possesses a hall of its own it may then arrange to hold a late exhibition of hardy fruits. The exhibition held at the Crystal Palace is not enough, as it does not represent our home-grown fruit in all its possibilities, and London as a centre is much more convenient than Sydenham. With a proper place in London, the Royal Horticultural Society could give the public an exhibition of hardy fruits early in September and another early in November. The first would bring out the early varieties, and the later exhibition would prove the quality of fruits in season. It must be gratefully acknowledged that this Society has done much for the enhancement of hardy fruit culture, and it can do more, which, judging by the past, it will. It has drawn up a list of the most suitable Apples for dessert, and another for cooking. These may not find favour with everybody's choice, but it is a great aid to exhibitors, and it would be almost a blessing if the Society could, or would, arrange like lists for Pears and Plums.

Pears especially require defining, for with the present selection of choice dessert Pears nobody would think of sending General Todleben in for dessert, yet it is allowed for exhibition amongst fruits defined as follows:—"Dessert Pears, fit for table." General Todleben is essentially a stewing Pear, and as such it should be exhibited. With Pears as a topic it is difficult to stay one's pen; as a subject, there so much to say about them, and so much more to know! Several years ago I made

the acquaintance of the Pear Madame Treyve, and every year since have wondered, and wondered hard, why Madame Treyve is not more generally grown for market. Experience proves that there is room for such a first-rate early Pear, and if it pays to grow such rubbish as Beurré de Capiaumont, surely it will pay to grow a fruit which everyone can enjoy. I have such faith in the Pear that I am sure when it becomes better known it will be a leading early market Pear. Properly graded, it is quite capable of holding its own against anything in its season. Madame Treyve does not grow to a large size, but size extraordinary is not a market requirement.

That brings me to another point. At exhibitions we find Pitmaston Duchess always takes a prominent position in all its ponderosity. Now, it is not of the first quality, and its great size does not make it a desirable fruit for dessert. In a class devoted to the variety it is well and good, but amongst first-class dessert Pears truly there are many which beat it. Could not the same body of men who arranged the size for dessert Apples arrange and make law, a fitting size for dessert Pears? It would greatly benefit the exhibitor, and would make popular some most deserving varieties.—H. A. B. JOHNS.

### Apple, Tamplin.

Apple Tamplin, or Cissy, was raised about 150 years ago by a Mr. Tamplin, who lived at Malpas, a small village about three miles from Newport, Mon. Evidently he knew the value of it, as during his lifetime he distributed grafts amongst his many friends, and after his death his sister, or daughter, I am not quite certain, but am inclined to believe it was a sister, named Cissy, continued to distribute grafts, and thus it came into general cultivation in the Newport, Chepstow, and Monmouth districts. Unfortunately, there are no young trees to be found now; in fact, the greater part of what is left are very old trees, but I hope to be able to again bring it into general cultivation. I may say reference is made to Tamplin's house in Cox's "History of Monmouthshire," a book written about 100 years ago, which points to the truth of my statement as to the time of its being raised. I am making further inquiries in the parish in which he lived, but unfortunately the parish register only dates back to 1813; but I intend to carefully examine the tombstones to see if I can find any record of his death. I may say I have collected twenty or more old seedling Apples, which I am propagating, some of which have a history which will have to be told a little later.—JOHN BASHAM, Bassaleg.

### Cankered Apple Trees.

I hasten to tender my best thanks to "J. E. A." for his kind reply to my query about the above subject. The information given is so clear and convincing that I have no doubt many besides myself will speedily tackle any cankered trees they have control over. In one respect "J. E. A." bears out a point I have noticed, viz., that cankered trees do generally bear, but then it seems that the fruit is "mere rubbish" when compared with that gathered from healthy trees. Ah! I see, there is the point. England has enough "rubbish" already, but she wants more good Apples. The cankered trees ought to be cured then quickly. The next time I meet my gardening friends, or I should say gardening-loving friends, we will try and stir to action the owners of cankered trees in our village. By-the-by, a newcomer has arrived at a small farm just outside the village, and he seems like stirring us up a bit by the way he is going to work. He has been digging and delving and ploughing and harrowing with a vengeance during the last few weeks in order to get a good stretch of land ready for planting fruit trees. Some of the villagers look on askance, and tell him that fruit trees won't do in our neighbourhood because it is not a fruit-growing district; but he only laughs, and says he knows what he is about; all fruit-growing districts were without fruit trees at one time, and that there are still as good fish in the sea as ever were caught. Some day, he tells us, our village will be reckoned among the fruit-growing districts. One old man shook his head suspiciously at the latter remark, and asked the newcomer what he was going to do with all the fruit when the trees came into bearing, because he said they had too much fruit in some places now, and had a job to sell it. The busy man smiled again, and replied, "We have never yet had too many good Apples in this country. Why, man," said he to the old unbeliever, "do you know that last month over 640,000 cwts of Apples were sent to England from foreign countries? And yet I think I can grow Apples quite as good as any of them on this land. And I expect before long some of the rest of ye will want to plant too. Anyhow, as long as Apples sell as well as they do, I shall keep planting as fast as I can get the money." I have thought of the newcomer's words a good many times since, and there seems to me to be a good deal of sense in his method of reasoning. I shall try and cultivate his acquaintance, and who knows, perhaps I shall blossom into a big Apple grower yet, though at present I am only picking up such crumbs of knowledge as fall in the path of an—IGNORAMUS.

### National Chrysanthemum Society and its Management.

Having read the few lines contributed to your valuable Journal, page 432, of November 6, by "A Country Member" regarding the Society's judges, I can, with others, fully agree with "A Country Member." The management of the N.C.S. is far from being carried out in a fair manner. Being an exhibitor of cut blooms at the Society's Show held on November 4, 5, 6, I was more than surprised at the unfair way in which some of the exhibitors are treated. Surely the committee can find, as "A Country Member" suggests, competent judges outside of the committee to adjudicate at what is looked upon as the leading Chrysanthemum exhibition of the country. Why does the committee allow the judges to view the exhibits and interview the exhibitors before the time of judging? Many of the members of the committee are exhibitors at the exhibition of the Society. They select their own judges, and make their own rules. Rule 9, page 64, of the N.C.S. schedule, reads:—"Exhibitors must leave that portion of the building allotted to the exhibition at eleven o'clock unless officially retained by the Show Committee." Rule 8 states that all exhibits for competition must be staged by 11 a.m.

Having staged my blooms in good time, I had a walk round the Aquarium. Having had a look at Mr. Godfrey's stand of novelties, I came across one of the decorative displays of the fountains, which was awarded the third prize, so I walked to the other end of the Aquarium to find the first and second prize winners. To my surprise, these first and second exhibits were unfinished, the exhibitors being still very busy completing their displays, the time then being 12.30, so I patiently awaited until 12.45, when the judges made their award. The first-prize winner was again Mr. Norman Davis, who is to be congratulated on his grand display, also on being the happy possessor of the same fountain he has obtained for three years in succession, which is the best-lighted position in the Aquarium. Now that the N.C.S. is seeking a fresh place of abode, let us sincerely hope there will be a change in its management, so that exhibitors, amateurs, and members of the trade, may each receive just and fair awards.—F. W.

### Culinary Peas.

The weather during the past season has been so very trying to most crops that it is interesting to note that Peas have done especially well; at least, such is my experience here. Commencing with the early section, we made our first sowing in turves in the following varieties:—William Hurst, Sutton's May Queen and Sutton's Little Marvel, placing the turves in a Peach house (which had just been started) on February 12. After germination the above were planted out on a south border on March 11. We commenced gathering from them on June 30; William Hurst and May Queen being ready a couple of days in advance of Little Marvel. I may mention that the weather was very cold during March, April, and May, and we had to cover the above every night with tiffany.

Our second sowing was made outdoors on a south border in front of a Peach house on March 3, the varieties being William Hurst and Sutton's May Queen. They were ready for picking only a week later than our first sowing in turves. Our next sowing was made on March 29, on ground recently occupied by Celery, the variety being Sutton's Early Giant. They came into bearing on July 6, and a finer lot of Peas I have never seen. It is a very free cropper, the pods bearing on an average ten peas in each, while several contained eleven. The flavour is all that can be desired, and it is, in my opinion, one of the finest Peas yet introduced. Following the above we sowed, for succession, at periods varying from a week to a fortnight between each, these:—Sutton's Telephone, Duke of Albany, Selected Telegraph, Sutton's Invincible Marrowfat, Sutton's Satisfaction, Sutton's Dwarf Marrowfat, Walker's Perpetual Bearer, Autocrat, Selected No Plus Ultra, and Sutton's Latest of All. The last three varieties were sown on June 27 on ground which had been dug and manured as for ordinary crops, and we have been gathering nice dishes from them up to the present month, our last picking being on the 5th inst.

Needless to say, Peas at this time of year are much appreciated by my employer, and should frost not visit us for another week or two, we shall be able to gather a few more dishes. Among two or three varieties received for trial, Sutton's Centenary turned out the best, and I shall certainly grow it again. From the end of June, when we gathered our first Peas, we were able to gather Peas every day without a break at the rate of half a bushel a day up to the end of September. Since then we have been able to gather quantities of about one peck about twice or thrice a week, according to weather. Our soil is heavy and retentive, on clay. This, combined with the satisfactory behaviour of our Peas during the past prolonged wet season, tends to prove that abundant moisture is essential to successful Pea culture. We have enjoyed almost entire immunity from mildew, our remaining rows of Peas still retaining their healthy appearance.—WILMOT H. YATES, Rotherfield Park, Alton, Hants.



### New Japanese Varieties.

Continuing my selection from p. 448, I have several more to recommend which I have quite recently had an opportunity of inspecting, and for the benefit of Journal readers give my experience.

CALVAT'S SUN grows to a large size, has long drooping florets, which curl at the tips, the weight of which seems to pull them down a trifle too much, so that the eye is not quite filled up. In colour it is golden yellow, just the colour to please.

MRS. W. PREECE is of medium size, has closely curling florets, which are split at the tips, they are also ribbed or fluted, which gives it a striking appearance. The colour is quite a deep yellow.

LADY CRAWSHAW grows to fully 8in in diameter, has medium florets, which droop and curl upwards at the tip, making up a full, bold flower. In colour the base is deep pink, growing lighter towards the centre.

MRS. S. FRYETT is fully 8in wide, and as much as 6in deep—a full, massive flower. The florets are broad and sword shape, semi-drooping. The colour is striking—a rich rose amaranth, quite one of the best of new varieties.

MISS ELSIE FULTON, although not quite new, deserves to be more generally known. In the North of England, and especially in Scotland, it has been remarkably well shown this season. It is a typical incurving Japanese, quite distinct from any other variety. The florets are broad, curling quite distinctly, not too closely united. The colour is the purest white, and the blossoms full and perfect in contour. I strongly recommend this variety.

PRINCESS DE BRANCOVA, although not quite new, deserves to be better known than it is at present. In general appearance it resembles Mrs. J. Lewis, but has much longer and more graceful drooping florets of the purest white. A bloom of this variety, fully 9in deep, won the premier award at the late Edinburgh show for the best Japanese.

EDITH SHRIMPTON in colour is a soft pink at the base, paling to pure white in the centre. The florets are broad and long, and curl at the tips after the Dragon style.

W. DUCKHAM is much the best new variety of the incurved-Japanese section seen for a long time. The broad incurving florets are deep rose pink in colour, of perfect form, and "build." This is an English raised variety from Australian seed.

COL. WEATHERALL belongs to the incurving Japanese section, with extra broad petals, which incurve perfectly. The colour—apricot-bronze—is pleasing.

WILFRED H. GODFREY has flat reflexing florets, rich crimson on the surface, and a gold reverse; quite a promising novelty.

HAROLD is another incurving Japanese, with a golden chestnut reverse, and an apricot rose surface where this can be seen.

DUKE OF DEVONSHIRE belongs to the giant class of Japanese varieties. The narrow florets have a curious twist. In colour the base is yellow with a rose suffusion, with a golden centre.

ETHEL FITZROY grows rather above medium size, the narrow florets reflex and droop at the tips. The flower is especially well built up. The colour is pleasing, a rich orange amber shaded with reddish crimson.

BESSIE GODFREY I look upon as quite one of the best of yellow flowered Japanese. The medium sized florets droop slightly, and with a graceful curve. The blossoms are especially well built up. The colour, clear yellow, deepens towards the centre. No matter how small the collection this variety should be included.

GUY HAMILTON may not be quite new, but it deserves to be much better known than it is at present. Where a full and broad blossom is required for exhibition this variety should be grown. The florets are long, drooping, and curl at the tips. The colour is pure white.



LILY MOUNTFORD has been exhibited in such magnificent condition this season that its merits should be more widely known. It has all the attributes that go to make up a typical Japanese blossom. When at its full size the blooms measure 8in in diameter. The true reflexing florets are creamy white in colour, heavily flushed, and striped with rose.

MRS. VALLIS is a dark terra cotta red, with a golden reverse. The florets are of medium width, droop, and curl slightly at the tip.

LADY ACLAND is 9in in diameter, and fully 5½in deep. The florets are broader than in the case of G. J. Warren, are split and forked at the tips. The centre of the flower is orange yellow, paling with age to a lighter shade. Quite a promising variety. (Jones).

SIR W. ACLAND has florets 7in long, fully developed blooms measure 10in in diameter. The broad irregularly twisted florets droop gracefully. The colour is a yellow base, edged, striped, and speckled with crimson. (Jones.)—E. MOLYNEUX, Swanmore.

#### Chrysanthemum, W. R. Church.

In the above we have a variety first exhibited at the Melbourne (Australia) Show in April, 1900, where it was awarded the Silver-gilt Medal as a novelty. It was also the winner of the Silver Medal at Edinburgh in November, 1900, as the best novelty, and F.C.C. at twelve other exhibitions (including the Paris Exhibition). It is now the most popular variety in existence. It was named after the wife of the secretary of the R.H.S. of Melbourne. Regarding the culture of W. R. Church, cuttings are best inserted about Christmas. Grow the plants on to their natural second crown bud, which generally appears about the middle of August. The plants will stand a good amount of feeding after the buds are as large as peas, and they should have a little sun and warmth, then the florets reflex, otherwise they are incurving; take three flowers for a 10in pot.

It is also one of the very best for 6in pots. For this size, insert the cuttings in March, stop when 6in high, then let them make one natural break, and secure the next bud, one flower to a pot. We have some splendid flowers now (November 25) grown this way, one of which is enclosed. [A really handsome flower.—Ed.]—W. W.

#### Chrysanthemum Mrs. T. W. Pockett.

The above popular variety was awarded the Wells Gold Medal in Melbourne in April, 1901; also the Silver Medal in Edinburgh in November, 1902, last for best novelty. This variety has been disappointing to all those who would not wait for second crown buds. It requires much the same treatment as W. R. Church, and should be treated the same. For 6in pot plants it beats even that noble variety. It is without doubt the most refined flower up to date, and those who have had the pleasure of seeing the splendid specimen plant which was exhibited at Manchester Show a few days ago will see at once the value of it for such purposes. It is a good match for, even if not better than Nellie Pockett, and those who have seen the two at Earlswood consider it the very best in the collection.

#### Chrysanthemum, W. Duckham.

This is a beautiful deep mauve-pink variety, Japanese-incurved, exactly the colour of N.C.S. Jubilee. This was the Silver Medal winner at Edinburgh this year, and was raised from seed which Mr. Pockett sent to Earlswood about Christmas, 1900, and was selected as one of the best when Mr. Pockett was here last year (1901). It has a wonderfully strong constitution, and requires stopping early in April to secure second crowns, otherwise the treatment is as for the other two. I merely mention this variety as it is the third Silver Medal (Edinburgh) winner, and must become as popular as the two others already named.

#### Chrysanthemum, S. T. Wright.

This is without doubt the most beautiful and I am sure the noblest of all the novelties Mr. Pockett has ever sent out. When I asked Mr. Pockett if he could not possibly send me a crimson Mrs. Barkley, he said: "In K. 20 you have your ideal crimson Mrs. Barkley." That told me enough, for Mr. Pockett does not waste his words, and this

was all he said to me about it. This was last May (1902), after they had flowered in Australia. We had but very few plants of it, and one only was stopped in April, which produced the magnificent blooms for which the Royal Horticultural Society gave the Award of Merit. The first crown buds were too late in opening, as they were packed too full of florets. The second crown buds were a little too late, although quite full; but even these would have been grand had they been placed in the sun, or in a house a little warmer; but, being a crimson, we naturally shaded them, and this was a mistake. It requires stopping early in April, and secure second crowns, and I shall not be surprised to see it quite as large as Mrs. Barkley, but with perhaps not quite such long florets. It will keep longer in good condition, however, than Mrs. Barkley, or any other variety, and will not damp, as it has such thick florets.—W. W.

#### N.C.S., Its Early History.

Respecting the National Chrysanthemum Society's early history, referred to by me on page 449, just one mistake, I thought I had better apprise you of it. Sir E. Saunders only became connected with the N.C.S. during recent years, whereas Saunderson, of Hackney, formerly presided. He died years ago; he was a 'cute old chap and grower, regularly taking first prize for incurveds, and was a very attractive speaker.—H. CANNELL.

#### Chrysanthemums at Regent's Park.

From conversation occasionally heard in various quarters, it seems evident that "things are looking up" at the Botanic Gardens, Regent's Park. This is certainly correct in regard to the Chrysanthemums, which I found effectively arranged in the large conservatory, with backgrounds of foliage. In the Japanese section might be noted blooms of Ella Herxheimer, Kate Howard, Mrs. G. Mileham, Charles Davis, Miss Alice Byron, Frances Connor, T. Carrington, Mrs. Barkley, and N.C.S. Jubilee, all of them good. Of the incurveds, Chas. H. Curtis is undoubtedly considered one of the most satisfactory, and several plants were to be seen. Col. Baden Powell, Golden Madame Ferlat, Louisa Giles, Ada Owen, Baron Hirsch, and others were also conspicuous.

A very pleasing effect was obtained by having tall plants of Margot (grown naturally) lightly springing from the upper portion of a large bank of foliage, with several plants of Lady-smith (single) and a few others of various sections furnishing the base. On our way to inspect the later plants in the growing department, two fine plants of Musa Cavendishi were noticed, and alongside of which was the Crinum exhibited earlier in the year at the Drill Hall, again bearing a magnificent spike of nearly three dozen flowers. Structural repairs and painting are also proceeding apace; and, I understand, the Council of the Royal Botanic Society have recently passed a vote of thanks to Mr. E. F. Hawes, the head gardener, for the very satisfactory manner in which he is carrying out the much-needed work of renovation.—R.

#### Mr Molyneux's Selection of Japs.

As a reader of the *Journal of Horticulture* I think I have a right to give a word of praise to that noble writer Mr. E. Molyneux for the different times he has written for it, and especially for his annual selection of novelties, but was sorry that he gave us (page 448) no white one. I would like to ask Mr. E. Molyneux (if it is not asking too much?) if he minds giving us his opinion of a few more novelties, as I think he has a bit of thought for us poor countrymen who have not the privilege of seeing them when they first appear. If we had the chance, I am afraid that there are a lot of varieties that would not be grown though they have received an award of merit; but as I had the privilege of seeing two dozen blooms exhibited by a noted distributor of Chrysanthemums, I took the names of seven that I thought were the best, so I will give these names:—Mrs. J. C. Neville, Mrs. Jarvis, Viscountess Cranforth, Edith Smith, General Hutton, George Lawrence, and Miss Mildred Ware. The last one named I see is recommended as a good one. Seeing that we have three noted distributors, I should deem it a great favour if Mr. E. Molyneux will select about eight distinct colours from novelties sent out by the three firms, Wells, Godfrey, and Jones. And if it is not too late for the Chrysanthemum analysis, I should like to make a suggestion which I think would lift some of the novelties higher up in the list. Look in last year's analysis and you will find that Lord Ludlow stands at number 20, and Sir H. Kitchener at 27, and as seen by me this year on the same stands, I think it should be six for one and half a dozen for the other; so if this catches the eyes of the gardeners who are giving their votes I trust they will consider the points of merit of each variety well.—O. L., Rotherham, Yorks.



### Rose Analysis: Bessie Brown, H.T.

Readers of the Journal, seeking to learn from Mr. Mawley's painstaking analysis the best Roses to plant in their gardens, should not be led astray by the premier position occupied by Bessie Brown in the long list of exhibition H.P.'s and H.T.'s, to plant it largely for any other purpose. It is an indispensable and most reliable Rose for exhibition, but is almost useless for the general grower. This is not because it is delicate, weak in growth, difficult to manage, or shy in flowering, for it has none of these faults; but simply because it hangs its head so much that it cannot be seen or admired unless the stem is wired. It is very much in its favour that it is possible to wire the stem. There are several Tea Roses which are apt to have crooked flower-stalks, the weight of the bud dragging it down while the stalk is yet pliable, and most of these have stiffened and hardened in their crooked state by the time the flower is fit to be cut, and then it is a difficult matter to wire them at all. Maréchal Niel is an offender in this respect, and Empress Alexandra of Russia is the worst Rose I know for crookedness of flower-stalk.

The stalk of Bessie Brown, however, immediately below the seed-vessel, remains pliable to the last, and offers but little difficulty to the anxious and hurried exhibitor. Nevertheless, the pendant flower very much detracts from its value for the ordinary cultivator. It does not matter so much with small garden Roses, of which you gather a bunch in all stages, and which are more dependent for beauty on their habit and colour than on the form of the individual blooms, if at certain stages of development they do hang their heads. But Bessie Brown is a very large fine bloom, whose beauty does depend upon its splendid form; the outer petals are likely to be somewhat discoloured, and if you cannot see its "face" the beauty is lost.

We do not want to have to wire blooms on the tree, or even in vases; and so, though I hardly like to describe Bessie Brown as "purely an exhibition Rose," I should strongly advise those who do not grow for exhibition not to plant too many of it.

Mrs. John Laing, H.P., though second to it in the analysis, is fifty points ahead of it at least in value for general use. Another H.T., Marquise Litta, which holds the high position of seventh in the analysis, is a difficult Rose to show well. Several times last season I saw it as quite the worst flower in the stand. It is very beautiful when quite young, but is apt very soon to become coarse in colour as well as form.

Another H.T., Killarney, which deservedly occupies a good place at No. 29, is a good show Rose of quite first-class form. This is one of the very few Roses which, sent out as "garden," have proved to be good show Roses. There are plenty of examples of the converse. It is not a good garden Rose, and does not appear in the analysis of that class at all; so we may hope that when the new N.R.S. catalogue is issued, it may be removed to its proper division.

None of the above remarks are intended as criticisms on Mr. Mawley's analysis, which only shows, and, no doubt, quite correctly, the number of times each variety has been shown at exhibitions of the National Rose Society. They are only meant to prevent one or two wrong lessons being learnt from it.—W. R. RAILLEM.

### Irish Rosarians.

Will you kindly permit a twenty years' correspondent of the Journal to express the pleasure felt in seeing the portrait of an old friend, Mr. George Dickson, sen. (page 474), and the accompanying kindly references last issue. Irishmen specially, north and south, feel a legitimate pride in a firm that has sent out fifty new Roses, vide last issue of their catalogue; and as the very interesting Rose analysis of Mr. Mawley shows (page 463), fourteen of those, Hybrid Perpetuals and Hybrid Teas, are actually among the sixty-six finest and most generally grown Roses in the world; and a similar proportion among Teas and Noisettes. When visiting Messrs. Dickson's nurseries some years ago, I ascertained that not one in a hundred of their hybridised seedlings can pass the trial before being sent out; and this gives an idea of the labour and care involved.—W. J. MURPHY, Clonmel.

### New Roses from Lyons.

PERLE DES NEIGES.—A Polyantha Rambler, having the appearance of Crimson Rambler, but with white flowers—a very remarkable plant. The foliage and habit are identical; its pectinate stipules indicate its origin. This variety is extremely floriferous, and bears corymbs of from twenty-five to thirty flowers till late in the season. The blossoms are *d'une blancheur éclatante*—a spotless, dazzling white, and expand well. This

variety was awarded a first-class certificate of the Lyons Horticultural Association on October 19, 1902.

BELLE CAPRICIEUSE.—A Tea, of medium height in growth, and having bright green foliage. The flowers are perfectly double, odorous, opening easily and well, the petals thick, coloured salmon-yellow above, and a rose shade on the reverse; the centre of the flower, when fully developed, is rose-peach. A variety of the first order. The beautiful variety Madame Martignier, which has received many awards this year, will be sent out this autumn, along with the two above named, by M. F. Dubreuil, Rose Grower, Route de Grenoble, 146, à Monplaisir-Lyon.—(From "L'Horticulteur Nouvelle.")

## Pruning Fruit Trees After Planting.

The question regarding the pruning back of fruit trees after planting is one that has often puzzled a considerable number of people. Some advocate planting and not pruning the first year, while others pin their faith on shortening back the first season. For my part, I consider the latter the best practice.

Why? I will endeavour to explain the principles on which this practice is founded, and leave it to the reader to judge as to whether it convincingly appeals to his reason. I will deal only with young and easily portable trees, because these are the kind of trees which are the most frequently planted to form fresh plantations. When a young tree is dug up from the soil in which it has been growing for a considerable time, it is seldom that it can be removed with the full complement of roots that it possessed previously. The utmost care may be exercised in lifting, but it is certain that a number of roots will be broken in the process, especially if they are thick roots, and extend to a distance. Fibrous roots lift readily because they are short, slender, and numerous, and are far the best; but it is not possible to ensure them in quantity on young trees without special treatment for a few years in lifting and replanting. The majority of trees, therefore, for planting have a reduced root system, owing to breakage in lifting, and further reduction by the necessary pruning back of the damaged roots.

It will be seen that the roots and branches are unevenly balanced, and according to the extent of root pruning so should the branches be dealt with. The less fibrous roots a tree has, the closer the pruning should be. Trees with sparsely furnished root systems require time to rebuild; consequently the energy which must first of all be utilised in recruiting the root power is not sufficient to induce vigorous growth over the whole of the original extent of branches, hence the desirability of shortening back. Pruning after planting does not necessarily mean immediate pruning, but before growths push in spring. It is always necessary to cut away unripe points of shoots, and this may be done before or just after planting; but the main pruning of newly planted fruit trees should be carried out just before the buds push in spring strongly, so that it can be seen where it is likely that the most promising shoots can be originated.

The advocates of non-pruning the first year say that the greater extent of leaf surface will increase the root power, and when the trees are shortened back the following year much better growth will result than if similar pruning was done the first year. This, however, does not necessarily follow, as if the roots are weak, energy will not be transferred over the whole branch system, and growths will either be weakly or die back. This is an effort of the trees to adjust themselves to altered circumstances. By pruning back the first year they are assisted to grow evenly and well balanced, and are in the right way to become fruitful in future years.

The general rule for pruning back the first season is to shorten to one-third or less, according as to whether vigorous growths are wanted to multiply branches. In reply to "Observer," on page 450, Cob Nuts should be cut back after planting, supposing the plant has a single stem, 2ft or 30in high. Shorten to 18in, and select half a dozen of the growths that push, which train at equal distances to form the tree.—E. D. S.

### Webster's Forester's Diary.

This book, which is neatly bound in limp leather, and contains half a page of separate writing space for each day of the year, with marker and note-tablet, is made additionally valuable by a complete list of the names and addresses of all foresters throughout the United Kingdom. Special information is supplied within the scope of its pages on thirty-nine subjects of particular interest to arboricultural circles. It is published by William Rider and Son, Limited, Timber Trades Journal Office, 164, Aldersgate Street, London, E.C., price 2s. 6d. net.



# NOTES & NOTICES

## National Dahlia Society.

**PRELIMINARY NOTICES.**—The annual meeting of the society will be held at the Hotel Windsor on December 16. The 1903 exhibition will take place on September 1 and 2 at the Drill Hall, Westminster. There will be a conference on the judging of Cactus Dahlias on the afternoon of the first day. Lord Ilchester has kindly consented to become a patron of the society. —J. F. HUDSON, Hon. Sec., Gunnersbury House, Acton, W., November 19, 1902.

## Royal Horticultural Society

The last meeting of the Royal Horticultural Society this year will be held on Tuesday, December 9, in the Drill Hall, Buckingham Gate, Westminster, 1 to 4 p.m. An election of new Fellows will take place at three o'clock. At a general meeting of the society, held on Tuesday, November 18, forty-four new Fellows were elected, amongst them being the Right Hon. Lord Hastings, the Right Hon. Lady Tweedmouth, Major F. G. Parsons, Major H. Ferry, and Captain Hineks, making a total of 1,089 elected since the beginning of the present year.

## Waterford Horticultural Society.

The annual general meeting of the above society was held on Thursday last, November 20, in the Council Chamber, Town Hall, Raymond de la Poer, Esq., J.P. (President), in the chair. The balance in the hands of the hon. treasurer, after payment of all expenses, to the credit of the society is £15 15s. 6d., showing an improvement over 1901. Mr. D. Cantmill, the much-esteemed secretary, resigned his office owing to the great pressure of other work, and carries with him the warmest regards of all the members.

## Presentation at Ballywalter.

On the evening of Thursday, the 20th inst., a very pleasant social function took place in the Lord Dunleath Arms, Ballywalter, on the occasion of a presentation to Mr. Edward Cole, who has been head gardener at Ballywalter Park for about six years. The proceedings took the form of a dinner and ball, and in regard to the former the catering by Mr. and Mrs. Blackburn gave the greatest possible satisfaction. Afterwards the Rev. W. Kerr, vicar of Ballywalter, was unanimously invited to take the chair. The loyal toasts having been cordially received, the chairman made the presentation. It consisted of a fine gold watch, which had an appropriate inscription. The reverend gentleman, in handing the gift to Mr. Cole, spoke in most flattering terms of his conduct and character. As they all agreed, the head gardener was most popular in the district, and was deservedly a general favourite among Lord Dunleath's tenantry.

## Shirley (Southampton) Gardeners.

Quite a change took place on Monday evening at a meeting of the Shirley Gardeners' Association, when money prizes were offered for cut blooms of Chrysanthemums with the understanding that the successful competitors should be called upon afterwards to give some account of their cultivation, and this resulted in an interesting discussion. The competition would have been greater but for the fact that the Shirley and Milbrook Horticultural Society are holding their first Chrysanthemum show on November 26. Mr. Shepperd (gardener to General Janner) was the winner of the first prize with exceedingly fine blooms. Mr. J. Biggs (gardener to General Nesbett) was a good second. The chairman (Mr. B. Ladhams, F.R.H.S.) called on Mr. Shepperd, who gave some useful hints on the cultivation of the Chrysanthemum. Mr. Biggs also gave his experience, while Mr. Jesse Jones, The Gardens, Terrace House, showed a thorough acquaintance with all branches of the subject. Other exhibits: Mr. B. Ladhams' dwarf Chrysanthemums in pots, vhc; Mr. Budd, a very fine dish of Beurré Diel Pears, vhc; Mr. J. Wilcox, Tritoma, hc. The next lecture will be given by Mr. Edwin Molyneux, V.M.H., on hardy fruit culture, with special reference to bush trees.—J. M.

## Coronation Trees.

Trees have been planted at the following places in commemoration of their Majesties' Coronation:—Frodingham, Scunthorpe, and New Brumby, Lines., on the 15th inst. Brass bands led the procession, and large numbers assisted at the planting at a minimum charge of 3d. each, the proceeds going to a local hospital. King Carlos of Portugal planted an Oak tree at Flemish Farm, Windsor, on November 19.

## Reading Gardeners' Association.

The fortnightly meeting of the above association was held on Monday, the 24th inst., and was well attended, Mr. F. Lever presiding. The subject for the evening was "All phases of pruning in connection with hardy fruit culture," this being the title of the first prize essay in the association's recent competition, and was read by Mr. C. P. Cretchley, The Gardens, The Honeys, Twyford, the successful competitor. The paper was of a practical character, and an interesting and profitable discussion followed, in which Messrs. Hinton, Wilson, Fry, Neve, Parfitt, Alexander, Exler, Iggulden, and Townsend took part. A splendid batch of Cyclamens was staged by Mr. F. W. Exler, The Gardens, East Thorpe, Reading; the plants showed splendid growth, and were full of flower. This exhibit was not entered for the certificate, but the members, to show their appreciation of the display, passed a special vote of thanks to the exhibitor. The subject for the next meeting will be "The Cultivation of Peaches and Nectarines," by Mr. W. Tribbick, of Brooke, Isle of Wight.

## Cambridge Gardeners.

The annual dinner of the Cambridgeshire Horticultural Society was held on Friday, the 14th inst., Sir Robert Ball presiding, and was supported by a large and distinguished company. In the toast to the society the chairman said that the horticultural society had been in existence since the year 1824, and it had had a most useful and valuable career. He visited the recent exhibition, and was immensely struck with the beauty, number, and variety of the exhibits. He could not but think that it was in an extraordinary degree creditable to the society, and indicative of the skill and energy with which the society's affairs were conducted, to have produced so fine a display.

## Ancient Society of York Florists.

The Chrysanthemum Show of this society is already fixed for the 18th, 19th, and 20th of November, 1903. It is also proposed to start a Dahlia Show, to be held, if possible, in the same building, on September 2, 1903. Beneath are given some figures and particulars relating to the society's finances during the last few years:

|       | Receipts at Chrysanthemum Show, 3 days. | Members' Subscriptions. | Prizes Awarded.  |
|-------|---|-------------------------|--|
| 1897  | £319 14 9                               | £174 12 0               | £278 7 3   |
| 1898  | 325 8 11                                | 174 12 0                | 262 3 9  |
| 1899* | 337 12 7                                | 184 17 6                | 319 16 9   |
| 1900  | 303 0 8                                 | 187 7 6                 | 284 11 6   |
| 1901  | 277 1 8                                 | 183 7 6                 | 287 3 9  |
| 1902  | 337 13 11                               | 195 18 0†               | 295 5 0, with slight addition for medals, &c., to be supplied. |

\* 1899.—Record for receipts.

† 1902.—Record for receipts beaten by 6d.

‡ Present Secretary held position for past four years. 1902 subscriptions include £5 5s. life membership from Lord Deramore, he being the only one.

## Cardiff Gardeners Association.

The usual fortnightly meeting took place at the Grand Hotel on Tuesday, November 18. Mr. C. E. Collier in the chair. Mr. W. Richards, hon. secretary of the Glamorganshire Bee-Keepers' Association, delivered a lecture, entitled, "Bee-Keeping," as regards (1). Feeders and Feeding; (2). Surplus Comb Honey and Run Honey; (3). Wintering. The lecture was one full of interesting and practical information, aided with illustrations of several useful appliances (both old and new). In giving recipes of a few kinds of feeding syrups Mr. Richards emphasised the importance of using pure cane sugar in each case. Also, he dealt at some considerable length upon the best way of manipulating the bees before extracting the honey, and again advising the best modes of wintering. Mr. Thomas Malpass (an old bee expert) very ably opened the debate, who could but endorse all that the lecturer had advised as being thoroughly practical, and this was also the general opinion of the members. At the conclusion a very hearty vote of thanks was accorded Mr. Richards for his instructive lecture, to which he suitably responded.—J. JULIAN.

**Cassell's Dictionary of Gardening.**

The eighteenth part (price 7d. net) has been issued, bringing the work down to *Ternstroemia*. The Dictionary will be completed in two more parts, and as it is a useful and very cheap reference work, young gardeners and others are commended to give it strict consideration.

**The Greenhouse, Kew Gardens.**

The following list of plants now flowering in the greenhouse (No. 4), The Royal Gardens, Kew, may be interesting as well as useful to those who endeavour to furnish a bright and varied display during autumn:—*Abutilons*, *Cyclamens*, *Chrysanthemums*, *Solanum integrifolia inermis*, *Salvia splendens grandiflora*, *Begonia incarnata*, *Funkia lancifolia* var. *tardiflora*, *Jacobinia (Justicia) magnifica* var. *pohliana*, *Statice puberula*, *Primula sinensis* in variety, *Primula Forbesi*, *Cyperus alternifolius*, attractive for flower, foliage, and stem growth; tree *Carnations*, *Angelonia salicariæfolia*, blue and white varieties; *Peristrophe speciosa*, *Eupatorium odoratum*, *Cannas*, *Primula obconica*, *Begonia Gloire de Lorraine* and its variety *Mrs. Leopold de Rothschild*; *Zonal Pelargoniums*, *Tecoma Smithi*, *Campanula isophylla* Mayi, *Rondeletia odorata*, *Campanula Loreyi*, *Celosia cristata* vars., *Begonia glaucophylla* (in a hanging basket), *Tuberose*s, *Calceolaria Burbidgei*, *Begonia coccinea*, *Acacia platyptera*, *Lilium Browni*, various *Epacris*es, *Bougainvillea glabra*, *Tropæolum Fireball*, *Plumbago capensis*, *Hidalgoa Wercklei*, *Maurandya scandens*, *Hibbertia dentata* (the last six as roof climbers), *Salvia azurea*, and *Begonia echinosepala*. The foregoing are not represented by merely one or two plants, but mainly by batches of from a dozen to twenty or thirty plants. *Chrysanthemums* are largely shown. The plants of different genera are not mixed on the stages, but each genus is placed to afford a massed effect by itself, or at most two genera are pitted in contrast.

**National Chrysanthemum Society.**

A largely attended meeting of the Executive Committee was held at the Royal Aquarium, Westminster, on Monday evening last, Mr. Thomas Bevan presiding. A letter was read from the President, Sir A. K. Rollit, M.P., who is now in the United States, regretting his inability to preside at the annual dinner, but expressing the hope he should be back in time to preside at the annual general meeting. The amount of prize money awarded at the November show was announced to be £330 9s., and a list of the medals awarded to miscellaneous subjects was also read. Certain protests against the decision of the judges at the November show were reported, which had been dealt with by the Arbitration Committee, and though it is set forth in the regulations that the decision of that body is final, one of their decisions was over-ruled by a vote of the Committee. A report was made of the amount of money subscribed to the Sir E. Saunders Memorial Fund, which the Secretary stated was only a little more than was required for the provision of one memorial medal. A financial statement was submitted, showing a substantial balance in hand, but a list of liabilities were recited of a somewhat heavy character. On the recommendation of the Finance Sub-Committee the sum of five guineas was voted from the funds towards the building fund of the new exhibition hall of the R.H.S. The following dates were fixed for the society's exhibitions in 1903, supposing, of course, the society will be in a position to carry them out on their present scale, viz., October 6, 7, 8, November 10, 11, 12, December 1, 2, 3. The dates of meetings of the Executive and Floral Committees were also fixed, subject to the same condition. It was resolved that the annual dinner be deferred until the spring; also that the Floral Committee be invited to dine as usual, the place and date being left to that body. It was resolved that a smoking concert be held on December 18, and a small Committee was appointed to carry out the same. The president having undertaken to revise the rules of the society, certain amendments suggested by him were read, and it was resolved they be considered at the next meeting of the Committee. An interim report was made as to certain places in which the meetings of the Committee might be held, and the same was referred to the Sites Sub-Committee. Nine candidates for membership were elected, including two Fellows.

**Gold Medal Fruit.**

Messrs. J. Peed and Son, seed and bulb merchants, Roupell Park Nurseries, Norwood Road, West Norwood, London, S.E., staged an exhibit of fruit at Birmingham Show on November 11 and 12, and were awarded a gold medal.

**Rugby and District Chrysanthemum Show.**

We understand that the sales at the flower stall conducted by the daughter and friends of Mr. William Bryant at the recent Rugby Chrysanthemum Show resulted in the sum of £7 4s. being sent to the Royal Gardeners' Orphan Fund. During the past dozen years Mr. Bryant and his friends have by similar means contributed no less a sum than £86 18s. 8d. to this charity, thus earning the grateful thanks of the committee and the orphans. We could heartily wish that all other societies holding flower shows would assist the fund in a similar way.

**Liverpool Amateur Gardeners.**

Although Chrysanthemum time, it was much to be regretted that they were not up to the usual mark, the twelve Japanese being secured by Messrs. Ellison and Thomas, Mr. Histed winning with three Japanese. For six incurved Messrs. Ellison and Wallace were rightly disqualified for showing incurved Japanese amongst them. Mrs. Stevenson quite gained notoriety by her admirable arrangement of basket and bouquet, still more bronze. Mr. A. Dodd was undoubtedly the lion of the evening; his cut flowers ranked very high, and were composed of *Eucharis*, *Orchids*, *Streptocarpus*, &c., first and certificate. So too with *Cattleya labiata* as the best single *Orchid*. There were many good plants for points, and taking the season the amateurs have made a bold and convincing set out.—R. P. R.

**Ipswich Mutual Improvement Society.**

The usual fortnightly meeting of the above society was held on November 20, Mr. R. C. Notcutt presiding. The subject for the evening was an impromptu discussion on Chrysanthemums, but from the small attendance of members one might infer that the popularity of the autumn flower was on the wane. Mr. Messenger, of Woolverstone Park Gardens, opened the discussion with a very able speech, indicating the principal points for debate. Most interest was aroused by this gentleman's remarks regarding the improvement of Chrysanthemum exhibitions, in which he advocated the total abolition of the show board and the substitution of vases. This view was generally supported by succeeding speakers, it being contended that a more artistic effect was obtained, also that the blooms were available for decorative purposes afterwards, while when shown on boards and denuded of all foliage they were practically useless for any other purpose. In discussing the question of exhibiting decorative varieties an interesting point was raised, viz., "What constitutes a spray?" It was suggested that the N.C.S. should provide a definition for the guide of its affiliated societies. Amongst those contributing to the discussion were Messrs. Chandler, Whittel, A. Creek, Close, E. Creek, Finley, and the chairman.—E. C.

**The Horticultural Club.**

The usual bi-monthly meeting of this club was held at the Hotel Windsor on Tuesday, the 18th inst., some thirty odd members and friends being present, and Mr. Harry J. Veitch taking the chair in the enforced absence of the president of the club, Sir John Llewelyn, Bart. Mr. Stevens, the well-known auctioneer, fulfilled his promise of giving a lantern exhibition of some of his remarkable photographs of flowers and animals, a promise which he more than fulfilled by adding thereto a considerable number of others, embracing landscapes and curios of many kinds, the exhibition of which, besides their unexpected variety and curious juxtaposition in many cases, being rendered additionally amusing by a fund of anecdote connected with his experiences thereanent as auctioneer. Groups of glorious *Orchids* gave place in dissolving view form to happy families of dogs, cats, and rabbits, to be followed by splendid specimens of poultry, huge cochins facing tiny bantams, black cats, white cats, furry Persian cats, and sleek cats, the biggest extremes being often brothers and sisters, great auks and their eggs, glimpses of lovely scenery, grim Maori heads, groups of Chinese officials, charming children, &c., followed each other



## Killerton, Devon.

Exeter is the county town of Devonshire, and Killerton, the residence of Sir T. D. Acland, Baronet, and Lady Acland, is a few miles from it. Exeter, the town, is beautifully situated on variedly undulating, or indeed hilly ground, being but a fac-simile of the surface contour through the whole southern districts of that sunny county, with sylvan brakes and virginal meads. The "City of the Waters"—Exanceastre—as the Saxons had named it, resisted the invasion of the Norman King William with unsurpassable intrepidity, and the siege of Exeter is one of the most romantic episodes in the history of the conquest of England.

One may be permitted a further digression to recall the names of some illustrious sons of Exeter, among whom are Sir Thomas Bodley, a sixteenth century worthy who established the magnificent Bodleian Museum at Oxford; Sir Vicary Gibbs (1750), the famous lawyer; William Gandy, the portrait painter; with Cardinal Langton, Sir William Petre, and others of lesser fame.

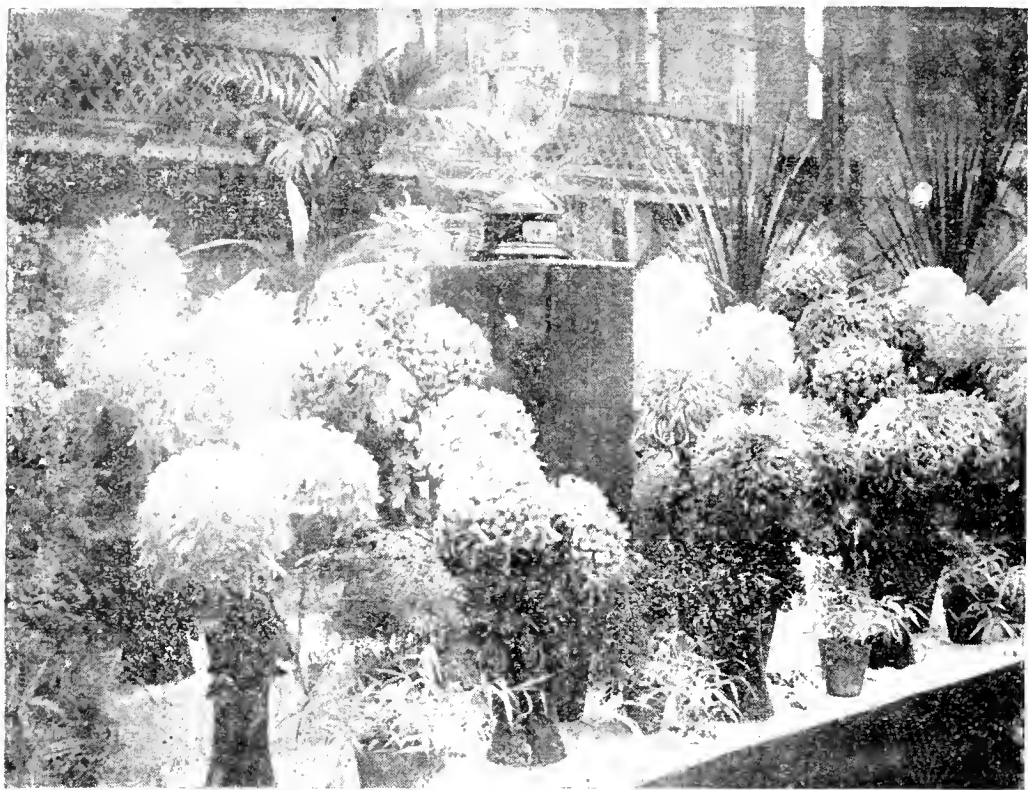
The region within a ten miles' circle of Exeter is numerously studded with townlets and villages, one of these being Broadclyst, named undoubtedly from the river Clyst, an important tributary of the Exe. Broadclyst is the post town for Killerton.

Famous for its trees, Killerton is a place of value in the eyes of "the man with a note book." Here one finds one of the earliest and largest of the Lucombe Oaks, growing outside the west garden wall. Many of the huge gnarled branches have grown together, and present strange forms. There are two forms of the Lucombe Oak, one having the unmistakeable Oak bark of the *Quercus Suber* and leaves of *Q. cerris*; the other form has the hard-ribbed bark of the common Oak. The tree at Killerton is assumed by some to have been worked on the common Oak, but it is difficult to detect the line of union of stock and scion, if such there be.

It was only in 1765 that William Lucombe raised this variety, and now the tree is of very massive proportions, and if it is proved to be as hardy and its wood as durable as that of *Quercus pedunculata*, there is every reason to hope that it may be very largely planted commercially. Mr. John Coutts, an Old Kewite, who has had charge of these gardens for two years, promises to send me the girth of this original Lucombe Oak.

Throughout the beautiful grounds surrounding Killerton House—which, unfortunately, lies low—there are interesting trees in abundance. The Evergreen Oaks are models of excellence, magnificent in form and size. Tulip Trees (*Liriodendron tulipifera*) are quite common, and one, at least, is said to contain more timber than any other of its kind in England.

Encompassing the private chapel in the grounds are double-lines forming avenues and circular rows of sentinel-like Cupressus—*C. erecta viridis* and *C. macrocarpa*. Each is a replica of its neighbour, and silently they hold themselves, as if the spirits of the air held an influence over them. Near at hand, but away from the chapel, stands a splendid *Abies Menziesi*, a model in evenness of



Twelve Japs., distinct, in trebles.

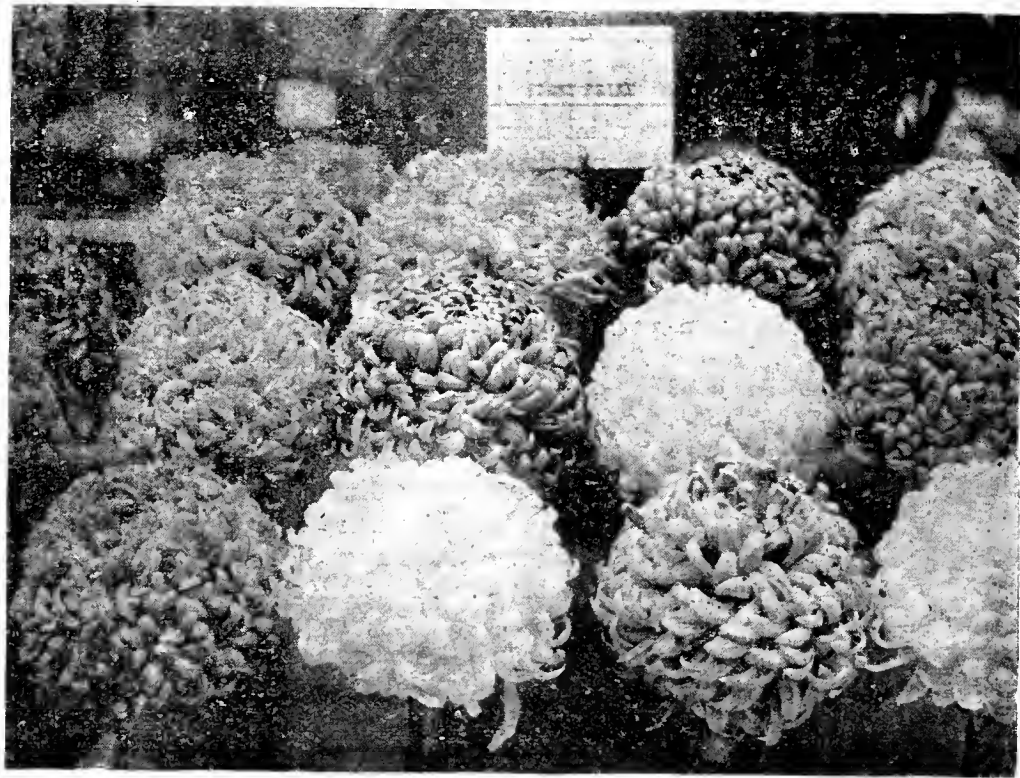
in bewildering succession, each one contributing a surprise, sometimes comical and sometimes weird. Mr. Golby, a visitor, lent some chromophotographic floral slides, made by himself, on the three-screen system, which were very beautiful. A hearty vote of thanks to both gentlemen was followed by a discussion in which Mr. Shea took part, and paid a well-merited tribute to the great ability displayed by Mr. Stevens, though he considered that colour photography on the screen system still left too much to individual peculiarities of treatment to be as yet capable of producing true colours. Mr. Golby, however, dissented, and considered that scientific handling rendered this possible.—C. T. D.

## EXHIBITS AT SOUTHAMPTON SHOW.

The illustrations of Chrysanthemums on these two pages are from photographs taken by Mr. E. Rye of Southampton at the exhibition held there on November 4, a report of which appeared on page 457 of our issue for November 13. The twelve Japanese varieties, distinct, shown in trebles, furnished a beautiful display. We illustrate the first prize collection, which was staged by Lady L. L. Ashburton (gardener, Mr. G. Hall), of Melchet Court, Romsey, and who obtained the Victorian Challenge Trophy for the ensuing twelve months, together with the society's medal. As may be seen from the reproduction, the Trophy vase is a work of art, and was, we are told, the object of much admiration during the time of the show. The twelve Japanese-incurved blooms shown at the base of this page won premier honours in class 7 for an amateur cultivator, Mr. C. Brown, jun., Alma Road, Southampton. The best varieties were Ethel Fitzroy, W. R. Church, Miss Alice Byron, and Princess Henry. [Mr. Brown is to be congratulated on the splendid specimens he exhibited and the remarkable success he attained. His entries numbered seven, and the awards were six firsts and one second. Mr. Brown won the two silver medals offered by the society for the most successful exhibitor in classes 11 to 15 and 16 to 19. Mr. Brown tells me he was only beaten in one class, and that was by the King, and he says he could not have been beaten by a worthier opponent. — E. E. RYE.]

The set of twelve Japanese Chrysanthemums on the opposite page were staged in class 3, from Mrs. Ogilvie (gardener, Mr. J. Davies), Rosecroft, Hambledon, winning first, and included Mrs. G. Mileham, Sir Herbert Kitchener, Pride of Madford, Madame Gustave Henri, Lord Salisbury, Edwin Molynaux, Madame P. Rivoire, Mrs. Coombes, Madame Hoste, Miss Alice Byron, Mutual Friend, and Phœbus.

Lastly, there are the six specimen Japs shown by His Majesty the King (gardener, Mr. G. Nobbs), Osborne House, Isle of Wight, in class 10, the varieties being Charles Davis and Australia—magnificent specimens. A general view of the fruit section will be given later.



Twelve Japanese-incurved Chrysanthemums.

contour. Groups of *Berberis Darwinii* are placed about, for this useful shrub is duly appreciated, and along the Devonshire coast, hedges are formed of it, the shears being but lightly used.

As one approaches Killerton House from the garden or chapel, wide and extensive views are obtained of the beautiful park with its herds of graceful deer and rugged ponies, the russet and crimson Beech woods rising up from the north side of the park to shelter the house and it. Besides the handsome patriarchal Beech, Oak, and Hawthorn trees adorning the expansive park, the incomparably rich hues of the Scarlet Oak (*Q. coccinea*) vividly glow beneath the streaming sunshine; and could there be a nearer semblance to "the earthly Paradise" than the picture thus feebly given—of the coolest of green grass stretching over many undulating acres and scarlet sun-illuminated foliage above, with sinewy deer in their innocence and elegance alone the inheritors?

*Kalmia latifolia* is usually seen as dwarf, tiny bushes, even in the latitude of London, but in the favoured south they obtain specimens 9ft high and 12ft through which enwreath themselves with flowers. *Berberis asiatica*, with pale spines, forms rounded bushes of interest, while *Fatsia* (*Aralia*) *Sieboldi* appears to good advantage and is of large size. Beds of Japanese Maples have lately been planted in place of the preponderance of Laurels and Rhododendrons previously on the spot. *Eucryphia pinnatifolia* is uncommon, and the same remark applies to *Olea ilicifolia*; tall *Cordylines* (*C. australis*) lend a sub-tropical character to the plantations.

Amongst Coniferous trees of note there is a *Libocedrus decurrens*, 70ft high; a *Thuyopsis dolabrata*, 36ft, one of three brought home from China by a Captain Fortesque, the others having gone, one to Frogmore, the other to Dropmore. It is a magnificent plant, with robust growth and a perfectly erect leader. A specimen *Fitzroya Patagonica* is 28ft high; a *Sequoia* (*Wellingtonia*) *gigantea*, 85ft; *Cryptomeria japonica*, 65ft; and a noble Douglas Fir, 70ft.

*Desfontainia spinosa* is a charming Holly-like shrub rarely seen northwards, though in parts of Ayrshire it flourishes. At Killerton in mid-November a large number of bushes were massed with the bright crimson tubular flowers, the mouths being tipped with orange. Mr. H. J. Elwes declares that at Killerton the plants luxuriate in a manner out of all comparison with the same species in its native Chilean habitats. At this place, too, there are three hoary Cork Oaks (*Q. Suber*) that, in the opinion of Mr. Elwes, "just look like the trees in their native home"

—northern Africa. These are 65ft high, and bear thick layers of cork. The Loquat (*Eriobotrya*—*Photinia*—*japonica*) grows sturdily on the open sunny banks, one plant being 9ft high and 12ft in diameter. Perhaps it may be fruited on a profitable scale, and the fruit is edible. The beautiful Snowdrop Tree (*Halesia tetraptera*) which, in the line of the Thames, or very little further northward, is always accorded the protection of a wall, at Killerton grows to 20ft. This is undoubtedly one of the loveliest of deciduous flowering trees.

To see *Embothrium coccineum* in the spring-time in parts of Devon and Cornwall is a sight of rare interest and splendour, but this very handsome shrub is only half-hardy. Groups of *Azalea indica* are becoming established out of doors in the gardens



Six specimen Japs.

here, and have remained almost unharmed through two or three winters. The only injured plants are those not shaded from the morning sun, for where the frosted plants have time to slowly thaw before the sun touches them they are well and healthy. *Eucalyptus coccifera*, with silvery-green foliage, furnishes a distinctively beautiful tree in the grounds. *Leucothoe* attains to bushy dimensions.

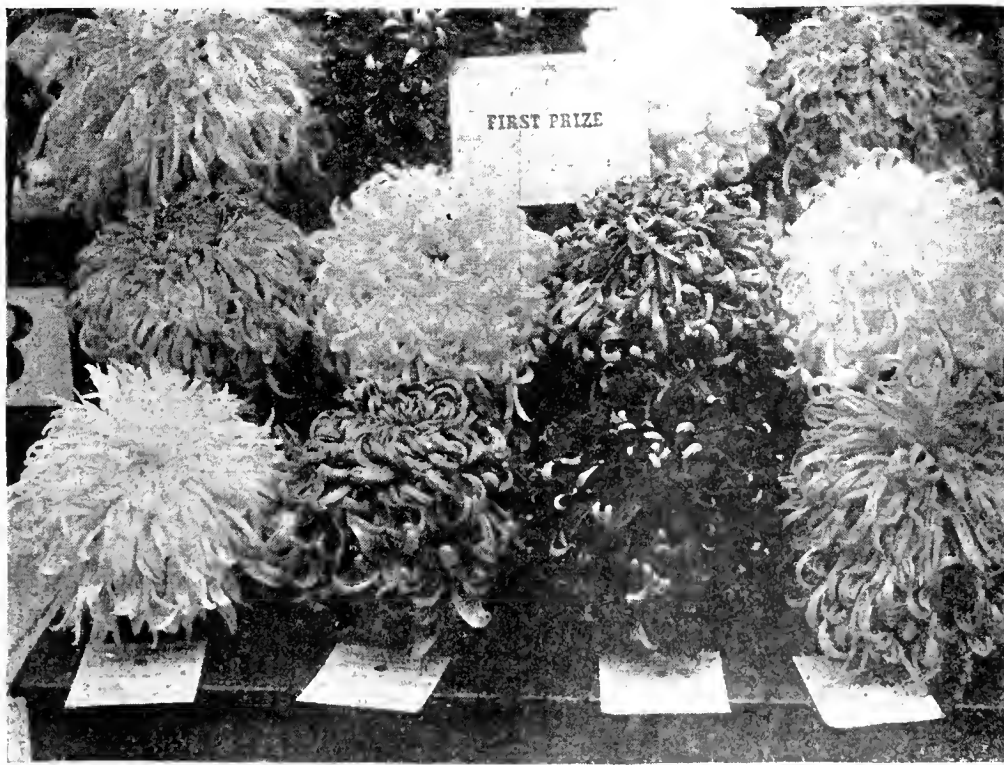
Another very effective tree during November, or earlier in a dry season, is the Liquidamber, with leaves of many richly tinted colours. The little Butcher's Broom (*Ruscus aculeatus*) grows wild wherever it is allowed to. A very curious shrub is *Colletia cruciata*, very dark green, and a mass of spiny growths. It is a subject of interest, though not of beauty, and would do well amid a collection of Brooms and *Ulex*, though it is one of the Rhamnaceæ. *Colletia spinosa* or *horrida* is coarser. Both have the same character as the Christ's-thorn (*Paliurus aculeatus* or *Spina-Christi*).

Rhododendrons are giants of their kind, and the best new varieties are being introduced. Mr. Coutts has already lifted some of the largest, like bushy trees, and replanted them in positions where their proportions will be more resplendently shown. One of these required three days to lift, transport, and replant it. Mr. Coutts is also raising batches of the choice Himalayan Rhododendrons

with the intention to plant them in well sheltered places about the kept grounds. Both Sir Thomas and Lady Acland are keen gardeners, and watch the present developments in their garden with much pleasure.

Amongst the new works engaging present attention, besides the remodelling or replanting of a large part of the grounds, there is an extensive rock-garden in process of making. The spot chosen lends itself remarkably well for the purpose, being on sloping, undulating ground, and not far from the house. Paths have already been laid down, and the general features of the rockery are planned. Boulders and stones are being fixed into position, and large pockets are a feature, for there is no necessity to confine the plantings. Rambler and trailing Roses, with species of *Rubus*, Honeysuckles, Clematis, and Vines, will be planted high up towards the back slopes of the rockery to heighten the effect and limit the vision. The same subjects are proposed for the upper ridges of a ferny ravine, which at present is an old sunk fence marking the boundary of the vast park. Lilliums, Mulleins, Foxgloves, and similar plants will accompany the Ferns in this part. Throughout large tracts of the sloping lawns amongst the

trees and shrubs there are thousands of Narcissi and other spring flowers. I must not omit to mention a quaint old summer house situated close by the new rock-garden, the floor of which is formed of the knuckle-bones of deer placed end upmost. Not far off from this spot there is a monumental marble column with plinth and lower base, erected to the memory of the present owner's grandfather by his county friends, Sir Thomas Acland, the grandfather, really made Killerton, and during his life and occupancy extensive plantations were made, as well as beautiful grass drives and roads throughout the estate. These are not now in the same keeping. The Deodar Glen, a magnificent sloping vista belted on either hand by huge Deodars, lies outside the garden grounds, but near the latter and the park. Seen at any time it



Twelve Japanese varieties.



is very beautiful, and must be quite a fairy scene when hoar frost or snow covers the branches of the trees.

In the fruit garden and amongst the glass houses progress has also to be recorded. New houses are being erected, and some of the old ones are being thoroughly renovated. Carnations are one of the chief features under glass, the gardener having freed the plants from disease by simply keeping them thoroughly dry at the root during winter. A healthier collection would be hard to find, both of *Mahmaisons* and *Trees*. *Begonia President Carnot* and *Clerodendron fallax* are nicely grown; *Cyclamens* are good as plants, though the strain is a poor one; *Bouvardias* are showy; *Tydaes* full of bloom; *Saintpaulia ionantha* in 3in pots on the edge of stages, sparkled with its "Violet" flowers; *Adiantum Farleyense* was perfect in every respect, and a fine batch was seen. Gold Ferns are largely grown and also a few Orchids, but these are of minor importance. A splendid plant of *Maréchal Niel* Rose in a lean-to house is treated in the manner recommended by Mr. W. R. Raillem, which is to cut down the shoots right to the base after they have yielded their quota of flowers in the spring, and to train up a new shoot in place of each one-year-old shoot removed. These straight cordon shoots are well ripened by the end of autumn, and are fit to, and generally do, produce basketloads of flowers early in the following year. But I must quit Killerton for the nonce.—J. H. D.

## Societies.

### Waterford, Co. Waterford, November 7th.

The annual Chrysanthemum Show, under the auspices of the Waterford Horticultural Society, took place on Friday afternoon in the Town Hall, Waterford, under very favourable auspices. The summer and winter shows of this society are regarded with the greatest interest not only in the city and county, but also in the neighbouring counties of Tipperary and Kilkenny. Under excellent management, and with the generous support accorded by horticulturists and fruit growers, it is pleasing to be able to record the fact that each succeeding exhibition marks an improvement. The chief classes included in the present show were Chrysanthemums—plants and cut blooms—fruit, vegetables, and roots. The entries totalled 251, as compared with 216 last year. In numbers a "record" was established, and as regards the quality of the exhibits all round the same remark might be made. The Chrysanthemum plants were most effectively staged in the Assembly Room, the cut blooms, fruit, &c., in the Council Chamber, and the vegetables and roots in the corridor and the small room leading off it. Everything was in perfect order when the judges commenced their work. To Mr. D. Cantwell, the efficient hon. secretary, is due principally the credit for the arrangements, which left nothing to be desired.

The following were the principal exhibitors:—Gardeners' classes: Lord Ashbrook, Durrow Castle (Mr. J. D. Atkinson, gardener); Lord Carew, Woodstown (Mr. Joshua Baker, land steward); W. G. D. Goff, Esq., Glenville (Mr. Hugh Innes, gardener); J. N. White, Esq., Rocklands (Mr. W. Taylor); E. A. White, Esq., St. Andrew's Terrace (Mr. Jas. Bagge); Mrs. Wall Morris, Ballinakill (Mr. Charles Walsh); W. Richardson, Esq., Prospect House (Mr. M. Hartley); R. Tyndall, Esq., Oaklands, New Ross (Mr. T. Dunne); Ursuline Convent, Waterford (Mr. John Farrell). Roots: P. Robertson, Esq., Annfield, Piltown, and A. G. Bowers, Esq., Silverspring, Piltown. Amateur classes: Mrs. Ridgway, River View; Mrs. P. Moloney, Newtown; Mrs. Snow, Blenheim House; Messrs. W. E. Bowers, Ballinvoher; D. Cantwell, Terminus House; James Moloney, Doneraile Terrace, Tramore; E. D. Trundle, Ballyin, Lismore; P. Hand, Newtown, and F. Lanigan, Grange.

The judges of the flowers and vegetables were Mr. David Crumbie, gardener to the Marquis of Waterford, Curraghmore, and Mr. John McClelland, gardener to Lord Carew, Castle Boro, Enniscorthy. For field crops: Mr. John Glennie, land steward to the Marquis of Waterford, and Mr. Wm. Mitchel, steward to Viscount Duncannon.

The cut blooms were a really splendid collection, and it would be impossible to get a finer assortment of plants. The Glenville gardens secured the Goff Challenge Cup and three first prizes for plants, and in the classes for cut blooms a silver medal (presented by Mr. J. N. White), a first, two seconds, and a third prize. They were undoubtedly the finest exhibit at the show, and reflected the greatest credit on Mr. Hugh Innes, the gardener at Glenville. Lord Ashbrook secured the Nelson and Mosley Challenge Cups and a number of other prizes.

The silver and bronze medals offered by Messrs. Wells and Co., of Redhill, Surrey, for novelties, were awarded to Mr. J. N. White and Mrs. Wall Morris, who were also prizewinners in other classes. The exhibits from the Ursuline Convent, Waterford, were very handsome, and were awarded several prizes. In the amateur classes Mrs. Moloney, Mr. D. Cantwell, and Mr. W. E. Bowers shared the principal prizes. Mr. W. Richardson secured three first prizes in the classes for Zonals, Primulas, and

Cyclamens. A section for Violets was introduced for the first time this year, and there were some very fine exhibits. The Glenville gardens secured two first prizes, and Mr. W. Richardson two seconds. Mr. W. E. Bowers showed some cut blooms of the *Princess of Wales* variety. They were not in competition, but the judges gave them a highly commended award. Mr. Bowers was very successful in the fruit classes, and Mrs. Snow, Mrs. Ridgway, and Mr. Tyndall were also among the chief prize-winners in this section. The attendance during the afternoon was numerous and fashionable, and in the evening it assumed very large proportions. The Waterford Amateur Brass Band was present and played a choice selection of music.

### York Chrysanthemum, Nov. 12th, 13th, and 14th.

The annual Chrysanthemum Show of the Ancient Society of York Florists was held in the Exhibition Buildings on the dates given. While nominally a Chrysanthemum show, the exhibition, as is well known, comprises many other features, including fruits and vegetables, and several classes for miscellaneous flowers. The total entries, which numbered 725, are about the same as in other years, being made up as follows:—Groups, 16; tables, 6; plants, 81; cut flowers, 174; fruit, 124; vegetables, 301. Special attractions were provided in the afternoon and evening in the shape of selections by the band of the Duke of Wellington's Regiment.

Class 1 was for a group of Chrysanthemums in a space of 100 sq. ft., for prizes of a piece of plate, value ten guineas, given by George Denison Faber, Esq., M.P., and eight guineas added by the society; second prize, seven guineas; and a third of five guineas. The awards fell to Mrs. Whitaker, E. B. Faber, Esq., and G. Cottam, Esq., respectively. In class 2, for a similar group, 80 sq. ft., the recipients were J. W. Hields; second, H. B. Oldham; third, E. B. Faber; and fourth, Mrs. Whitaker, the awards being given for cultural excellence only. The succeeding class was for a pillar group with a mirror in the centre, the first prize of a piece of plate being given by the Lord Mayor (Alderman L. Foster, J.P.), with monetary prize by the society. The honour of the first prize went to Messrs. R. Simpson and Son. A mass of foliage and flowering plants, with light Palms and an Orchid or two at the top, was built up on a foundation of cork bark lashed to the pillar, and the judges evidently favoured the freeness of arrangement seen in the winning group. Amongst the items used were *Salvias*, *Spiræas*, *Dracænas*, Palms, and Chrysanthemums; whilst the *Cissus discolor* trailed gracefully over the top of the mirror. The second group, shown by Mr. J. Key, consisted of a free arrangement of Chrysanthemums, Lilies, and Pelargoniums, with trailing plants, chiefly *Asparagus plumosus*, and the result was worthy of the praise bestowed upon it. Mr. Cottam was third.

A large number of special prizes were presented, notably by Messrs. Clibran and Son, of Aittrincham; Mr. H. J. Jones, Ryecroft, Lewisham; Anglo-Continental Guano Company; and Wells and Co., Limited, Earlswood, Surrey. In the cut flowers (open) division some splendid flowers were on view. For the thirty-six, eighteen each of incurveds and Japs, Mr. A. Tate led off, followed by Messrs. Baird and the Earl of Harrington. Mr. Tate was again the leader for the incurved eighteen; while for twelve, ditto, Lady Walker was foremost. The winners for eighteen Japs, distinct, were Mr. A. Tate first; with the Earl of Lonsborough second; the Hon. T. Dundas third; and the Marquis of Ripon fourth. For the dozen, Lady Walker led; and second, the Marquis of Ripon.

The show of fruit was better than could reasonably have been anticipated, in view of the bad season. As usual, there was a keen competition amongst the exhibitors in the Grape section, and the judges must have found it difficult to discriminate between at least four or five of the lots submitted to them. In the class for six bunches of Grapes, three varieties, Lady Walker secured the premier honour with some well-finished bunches full of very fine berries. One bunch of Muscats appeared to be slightly under-coloured. In the class for two bunches of black Grapes, Lady Walker also won the first prize with some beautiful Black Alicante. The class for collections of dessert fruit, each to have six distinct varieties, attracted a good number of exhibitors. Lord Lonsborough was placed first with a collection remarkable for the fine clear colour of the fruit. The Grapes shown by the second winner, Mr. McDoe, were hardly so well coloured.

Quite a new departure has been made this year in the fruit section, six classes of which are reserved exclusively for the produce of Yorkshire gardens, grown in the open air. The response on the part of exhibitors has been most gratifying, and the quality of the fruit indicates that in spite of climatic drawbacks, peculiarly its own, Yorkshire-grown fruit can compare favourably with that even from the fruit orchards of the sunnier South and Midlands. There was an excellent display of vegetables, which, as usual, occupied the whole of the north galleries.

There was a very good attendance at the show in the afternoon and evening, when the band of the Duke of Wellington's Regiment played a popular selection of music. The admirable arrangements for the show were carried out by an efficient committee, with Mr. George F. W. Oman as secretary.

It was the general opinion that the attendance for a first night was the greatest ever known. This was probably correct, although the receipts were not as great as has been the case once or twice. But it must be considered that there are now considerably over 700 members who have a couple of complimentary tickets at their disposal, and the membership was not so great in the past. Therefore, although the paying admissions may not have been so great (more than 1,000 had 1s. tickets), the crowd was probably the biggest. On the first day the receipts were £126 7s. 10d.; in 1901, £85 16s.; in 1900, £128 16s. 11d.; and in 1899, £141 2s. 2d.

Amongst the trade exhibits was a wonderful Orchid, *Odontoglossum grandis*, with forty-eight blooms, shown by Mr. E. Hall, of Leyburn. Messrs. Walshaw and Son, Scarborough, had a notable collection of Lilies of the Valley, Trumpet Lilies, flowering Heaths, Begonias, and *Solanum capsicastrum*. Messrs. Mack and Miln, Darlington, were awarded the gold medal for the best trade exhibit. Their stall, which was situated at the entrance of the large hall, was decorated with some fine specimens of Roses grown at their Catterick Nurseries. The centre is occupied by a fine *Acalypha*, and around it is a group of beautiful Begonias of the Lorraine type, bordered with Gloxinias. These in their turn are flanked by a fine show of Cyclamen in white, rose, and crimson, arranged with Maidenhair Fern. Beautiful specimens of the scarlet *Amaryllis* completed the display, which was very effective. Messrs. House and Son showed some charming Violets; and choice specimen Chrysanthemums were, as usual, to be found on Messrs. W. Wells and Company's stall.

### Frome, November 13th.

The annual show in this thrifty little borough was held under the most favourable of autumn weather, the show, a record one in point of entries, surpassed even itself in its excellence of all-round quality. The principal class, that for twenty-four Japanese, distinct varieties, brought out a spirited entry, no less than six excellent stands being staged, Mr. Robertson, gardener to J. S. Donne, Esq., Castle Cary, securing first prize with, as his best blooms: Nellie Perkins, Lord Ludlow, Mrs. G. Milcham, M. L. Remy, Ella Curtis, and a fine bloom of the old Julia Scaramanga. Mr. Strugnell, gardener to Colonel Vivian, Rood Ashton, was second; and the Frome Fruit and Flower Co. third. In the next class, for twelve varieties, Mr. Pope, gardener to Chas. Baily, Esq., won from Messrs. Robertson and Cray and Sons, Mrs. J. Bryant, Vicar of Leatherhead, Mrs. Mease, and Matthew Smith being very fine. Twelve incurved Japanese found but one competitor, but six of one kind brought up some of the finest blooms in the show. Mr. Pope staged Mrs. Mease for this, and for a single bloom for first prizes. There are also district classes for cut blooms, which are well contested.

Groups are always a fine feature at the Frome shows, and the rivalry very keen among local men. In the nurserymen's section Messrs. Cray and Sons beat the Flower and Fruit Co., though each production was fitted for a greater contest; and in the gardeners' class, Messrs. Pope and Moore, gardener to Miss Sinkins, Frome, excelled. There are classes for specimen untrained Chrysanthemums, Ferns, foliage plants, all of which display skill in growth and artistic arrangement. Begonias form a new class, and a bright one, too, the best six coming from Mr. Pope. Cyclamens and Primulas were staged in good form by Mr. Strugnell, and table plants by Mr. Runnacles, Sherborne. Vases of Chrysanthemums, decorated tables, baskets of autumn foliage, bouquets, &c., all find encouragement, and a new class for Violets arranged in vases found many admirers. Mr. Strugnell staged these in six varieties, Mr. Pope being second.

The non-competitive groups from Mr. Pearce, gardener to the Earl of Cork, and Mr. Gandy, gardener to the Marquis of Bath, are features of great value, that from Marston in particular, by reason of the grandly coloured Crotons, Dracenas, Begonias, and other plants, which fill the end of the spacious market hall.

The shortness of the fruit crop accounted for a lesser strain on space, though quality was none the less present. Two good collections were staged in the class for six dishes, Mr. Strugnell and the Frome Fruit and Flower Co. being the winners; the first named also won with three dishes of dessert and three of cooking Apples; also Pears. The Fruit and Flower Co. won with black Grapes; and Mr. Morse, gardener to Mrs. Knatchbull, white. Vegetables are uncommonly good at Frome shows, and this season especially so, though the competitors are not drawn from beyond a local area. Mr. Vincent is most assiduous, painstaking, and popular as a secretary, and well deserves the high praise bestowed upon him by everyone—competitor and patron alike.

### Barnsley, November 13th and 14th.

The sixteenth annual exhibition of the Barnsley Chrysanthemum Society took place in the Public Hall, Barnsley, and was an unqualified success. The exhibits throughout were excellent, considering the wretched season, while there was only a slight fall in the entries in the local classes. Fruit throughout was good, particularly in the Grape sections, and though there was

not an extensive display in groups, the winning collection was one of the finest ever exhibited in Barnsley. It was a splendid arrangement, intermixed with handsome foliage plants. The four corners were composed of *Cattleya Prince of Wales* and *superba* and the effect was most brilliant, and one of the prettiest we have seen in the north of England tour. The prizewinning blooms, both in the incurved and Japanese classes were the property of Mr. A. Alderman, gardener to G. D. Ellis, Esq., Sparken House, Worksop, who always brings his best to this show, and invariably is well rewarded. The bouquets were a special feature of the show, and a decided improvement upon last year's exhibits. The awards, which were distributed by Mr. W. Daniels, of Dewsbury, and Mr. J. P. Leadbeater, of Tranby Croft, were adjudged as follows:—

**OPEN CLASSES: PLANTS.**—Group of Chrysanthemums, flowering and ornamental foliage plants, arranged for effect, occupying 64ft: First, A. E. Wilson, gardener to Mrs. Guy, sen., Beever Hall, Barnsley; second, J. Nall, Esq., Aldersgate House, Barnsley (gardener, Mr. F. Buck).

**CUT FLOWERS.**—Eighteen incurved, not less than twelve varieties and not more than two of one variety: First, A. Alderman (gardener to J. D. Ellis, Esq., Sparken House, Worksop); second, A. Brooks (gardener to the Countess of Rosse, Womersley Park, Pontefract); third, J. Findley (gardener to Mrs. R. H. Heywood-Jones, Badsworth Hall). Eighteen Japanese, not less than twelve varieties and not more than two of one variety: First, A. Alderman; second, A. Brooks; third, J. Findley. Twelve incurved, not less than eight varieties and not more than two of one variety: First, A. Brooks. Twelve Japanese, distinct: First, A. Brooks; second, J. Findley. Six incurved, any variety: First, A. Brooks; second, W. Michael (gardener to A. P. Woodruff, Esq.), Hall Bank, Barnsley. Six Japanese, any variety: First, A. Alderman.

**Bouquet made of Chrysanthemums and any kind of foliage:** First, A. Alderman; second, G. Wilkinson, Barnsley; third, T. Ketchell (gardener to C. H. Simpson, Esq., Moor Top House, Ackworth). **Vase of Chrysanthemums, any variety, with Chrysanthemum foliage, arranged for effect:** First, T. Ketchell; second, A. Gibson (gardener to R. K. Micklethwait, Esq., of Ardesley House, Barnsley); third, A. Lockwood, Barnsley. **Six vases of Chrysanthemums, single flowering, not less than four varieties and not more than two vases of one variety, six sprays of one variety in each vase:** Third, E. Foster. **Six vases of Chrysanthemums, six varieties, three of one variety in each vase:** First, A. Gibson (gardener to R. K. Micklethwait, Esq., Ardesley House, Barnsley); second, A. Brooks; third, A. Alderman.

**FRUIT.**—Collection of dessert fruit, consisting of one bunch black Grapes, one bunch white Grapes, two varieties Apples, six of each, two varieties of Pears, six each: First, J. Findley; second, A. Alderman; third, T. Ketchell. **One bunch of black and one bunch of white Grapes:** First, J. Findley; second, A. Alderman; third, T. Ketchell. **Dish of six dessert Apples:** First, A. Brooks; second, W. Winter (gardener to C. Fox, Esq., Cockerham House, Barnsley); third, A. Alderman. **Dish of six cooking Apples:** First, A. Brooks; second, A. Alderman; third, F. Buck. **Dish of dessert Pears:** First, J. Findley; second, W. Winter; third, A. Brooks.

**PRIMULAS.**—Six Primulas in pots, white or coloured, single or double: First, A. Alderman; second, A. Gibson; third, A. E. Wilson.

**DECORATIVE PLANTS OR FERNS.**—Six dinner-table plants or Ferns, distinct, in pots not exceeding 6in in diameter: First, A. Gibson; second, W. Winter; third, E. Foster. **Two Palms, dissimilar:** First, A. Gibson; second, A. E. Wilson. **Three ornamental foliage plants, Palms excluded:** First, A. Gibson; second, E. Foster.

Too much praise cannot be awarded to Mr. W. B. Armitage, the popular secretary (who, we are pleased to hear, has now recovered from his serious illness), and a very popular attraction which made the show a financial and social success was the concert performances of the Queen's Own Yorkshire Dragoons' Band.

### Chester Paxton, November 13th and 14th.

The fourteenth annual exhibition of the above society was held in the Assembly Room of the Town Hall, Chester. The show was found in all departments well up to its former standards of excellence, and great credit is due to the active members of the society for the tireless energy with which they carry out the arduous organisation the exhibition entails year after year.

To encourage cultivation of the single varieties, Captain McGillyeuddy, Bache Hall, offered for competition a handsome silver Challenge Cup, together with £5 in prizes, and by a happy coincidence the trophy was carried off by the donor's own gardener, Mr. E. Stubbs. The second prize went to Mrs. Townshend Ince, Christleton Hall (gardener, Mr. Thomas Weaver).

In the large bloom class, in which the entries numbered only three this year, the premier honours fell to Mr. T. Gibbons Frost (gardener, Mr. Gilbert), who staged one of the most magnificent collections ever seen at a Paxton Society's show. Dr. Lawrence, County Asylum (gardener, Mr. Ellis), secured second prize with



a very creditable group; third, Mr. E. Dixon, Littleton Hall (Mr. J. Dutton, gardener).

A new class for eighteen cut blooms produced a magnificent display, and first prize was easily carried off by Sir George Meyrick, Bart., Anglesey (gardener, Mr. W. Pilgrim), while the second went to a new exhibitor in the person of Mr. W. E. Whinneray, Leighton Court, Neston (Mr. Thos. Jennion, gardener). The single varieties of cut blooms were largely represented, first prize going to Mr. J. Mossford, Tattenhall (gardener, Mr. J. Breen). There were also strong entries in the class for naturally grown trusses, and first and second prizes were won respectively by Mrs. Townshend Ince and Mr. C. Threlfall, Tarporley. In the class for nine Japanese blooms the Hon. Mrs. Kenyon, Macfen, took first prize with a magnificent group of blooms of various shades of colour.

As usual, Messrs. Dickson's honorary exhibit occupied the lower end of the room, and was quite unique in its way. There were exceptionally attractive floral designs of a harp and an anchor, with a bridal bouquet.

Messrs. McHattie and Co. staged an interesting exhibit of Apples, Pears, Tomatoes, and foliage and flower plants, and Mr. F. W. Dutton, Queen's Park Nurseries, staged a pretty exhibit, which included a cross, anchor, a bridal bouquet, Lilies of the Valley, sweet-scented Violets, &c.

A unique display of Apples, Bananas, Oranges, and Grapes was staged by Messrs. J. Little and Son, Eastgate Row, who kindly obtained the collection from Sir A. L. Jones, of Liverpool. Sir A. L. Jones, as is well known, takes a great interest in the importation of colonial fruit, and this exhibit, which was composed entirely of colonial fruit, was examined with much curiosity. A magnificent display of fruit and flowers was sent by Mr. Barnes, head gardener to the Duke of Westminster. It included Apples, Pears, and Grapes, with a striking variety of cut flowers, the whole effect being of a most pleasing character (gold medal). Mr. John Taylor sent fine specimens of Arbutus in flower and fruit, which had been grown in the open at Colwyn Bay. This shrub will not bear fruit or flower in Cheshire. The judges were as follows: Chrysanthemums, Grapes, and table decorations, Mr. Doe, head gardener to the Earl of Derby, Knowsley Park, and Mr. Flack, head gardener to the Marquis of Cholmondeley; gardeners' section for fruit, Mr. Severn, gardener to Katherine Duchess of Westminster, Combermere Abbey, and Mr. John Taylor, late of Hoole Hall, and now of Colwyn Bay; remaining sections for fruit, the Rev. L. Garnett and Mr. Ford, gardener to B. Glegg, Esq., Backford. The arrangements were admirably carried out by the executive committee, with the able assistance of the enthusiastic hon. secretary, Mr. G. P. Miln.

### Edinburgh, November 13th, 14th, and 15th.

(Concluded from page 483.)

**MISCELLANEOUS PLANTS.**—These made a good show, and though not the best time of year for tender subjects, the competition was keen. For the best group of Chrysanthemums and other flowering and foliage plants there were this season only two entrants—the veteran, Mr. Wood, Oswald House, and Mr. Hunt, Murrayfield, also an old competitor. They were placed in the order named, Mr. Wood excelling his rival in quality of bloom and massiveness, but Mr. Hunt struck quite a new line in Chrysanthemum group arrangement, and for effect far out-distanced his rival. This consisted of a good centre group, with smaller groups at the corners, with dotted plants at intervals between. It was much admired by visitors, and should set a pattern for more graceful arrangements in future. For Palms Mr. G. Wood and Mr. McMillan, Trinity, divided the honours. Mr. Lunt and Mr. McIntyre, The Glen, were respectively first and second for Dracenas. For decorative foliage plants Mr. A. Knight, Lenzie, was first with capital plants, and Mr. McMillan, Douglas Castle, second. There were also good displays of Primula obconica and Chinese Primulas, zonal Pelargoniums, Roman Hyacinths, table plants, Ferns, &c. A class for Begonia Gloire de Lorraine was specially noteworthy, the six plants from Mr. Young, Hartrigge, which gained first prize, being specially well grown and attractive.

**FRUIT.**—For the late period of the season fruit made a fine show. In the Grape classes there were no fewer than fifty entries, mostly of excellent quality. For four bunches distinct varieties Mr. Leslie, Pitcullen House, Perth, was first with fine bunches, and Mr. Kidd, Carberry, second. For two bunches, one black and one white, Mr. Kirk, Alloa, was first, and Mr. Leslie second. For two bunches Muscat of Alexandria Mr. Kirk was first with grand bunches of splendid golden colour, said to be the finest coloured Muscats seen this season. Mr. Kidd was second with a pair of bunches that would have been fine, if Mr. Kirk's had been absent. For Gros Colman Mr. Leslie was first, and Mr. Kidd carried first for Lady Downe's. For collection of eight kinds of fruit Mr. Kidd secured first honours with good dishes, his Grapes carrying him well through. Mr. Kidd, as a comparatively young man, has made a marvellous stride in fruit competition this season, and promises soon to take front

rank. Mr. McIntyre was a good second for collection. There was a good display of Apples, which were well coloured and good size for the season. Mr. Moir, Rosehampton, secured first for eighteen varieties grown in Scotland with fine examples, Mr. Lawrie, Prestwick, being a good second. For eighteen varieties (open) Mr. Martin, Corndean, was well first. Other fruits were equally good and well contested.

**VEGETABLES.**—These were very largely in evidence, and were quite an exhibition of themselves, the entries being over 300, and quality was mostly above the average. For the collection of ten varieties three noted growers stood in order of merit as named: Mr. Waldie, Dollar; Mr. Harper, Tullibelton; and Mr. Rae, Kelso. These were very fine and equal to any show. For six kinds Mr. Waldie was again first, and Mr. Dickson, Glenormiston, second. For separate dishes of vegetables there was a very keen competition, in some classes the entries being over thirty (thirty-eight for red Beet). Quality was mostly good, especially Leeks, of which there were some grand specimens, the first prize ones, from Mr. Hood, St. Boswell's, being marvels of high cultivation.

**NON-COMPETITIVE EXHIBITS.**—These were not quite so numerous as usual, but for the most part were both meritorious and attractive. The most notable was that put up by Mr. Godfrey, of Exmouth, who travelled north for the first time to show the canny Scot his prowess as a raiser and grower of Mums and other specialities. He filled a sloping table, 4ft long, with a most attractive display of Chrysanthemums, largely of his own raising, conspicuous among them being Mrs. D. O. West, Glory of Devon, F. E. W. Dawes, Col. Weatheral, F. S. Vallis, Mafeking Hero, &c. The table was beautifully relieved with Crotons, Asparagus, and other foliage. Mr. Godfrey also made a nice display of Carnations and zonal Pelargonium blooms. We are sure the attention given to Mr. Godfrey's exhibit would be highly gratifying to him, and it is to be hoped he may become an "annual" at Edinburgh. A gold medal was deservedly awarded.

Messrs. Thomson and Sons, Clovenfords, staged a nice exhibit of Palms and other foliaged plants, along with a number of baskets of splendidly grown Gros Colman Grapes (silver medal).

Mr. John Downie, Edinburgh, exhibited a large group of Coniferae and ornamental shrubs, arranged most artistically on the floor. These were beautifully varied as to colour, the golden tints of the Maples being specially effective to relieve the more sombre greens (silver medal).

Messrs. Dickson and Sons had a smaller collection of shrubs and Conifers, which was attractive. Messrs. Dicksons and Co. exhibited a table attractively filled with Primula obconica in very varied shades, and other flowering and foliage plants (bronze medal).

Messrs. W. Wells and Co., Red Hill, Surrey, brought a nice exhibit of new Chrysanthemums and a fine collection of single-bloomed varieties: Mrs. T. Longley, Mary Inglis, S. T. Wright (very bright), Pantia Ralli, were most conspicuous. Messrs. Wells were awarded a prize for new Chrysanthemum not in commerce, Mary Duckham.

Messrs. Laird and Sons exhibited a "strange device" in Dahlias in the shape of a cottage fireside, with chair, &c. As a Dahlia exhibit in November it was wonderful, and the quaint way they were exhibited attracted much attention (silver medal).

Messrs. Dobbie and Co., Rothesay, exhibited a highly attractive exhibit of fifty varieties of Potatoes, new and old. These were fine samples and most effectively staged (silver medal). Messrs. Boyes and Co., Leicester, exhibited a small but most attractive table of cut Carnations, of which they make a special feature. A special certificate of merit was awarded.

Messrs. House and Son, Westbury, Bristol, had a very pretty table of the choicest varieties of sweet Violets. Mr. Thos. Scarlett, Edinburgh, exhibited a table of novelties in Potatoes, including Northern Star, a new variety in such repute that 10s. per pound is asked for seed. As usual at this exhibition the Ichthemic Guano Company, Ipswich, had a pretty stand, very elegantly decorated with Chrysanthemums in pots, Palms, Ferns, &c.

One of the leading features of the show was a floral exhibit by Messrs. Todd and Co., the well known Edinburgh floral decorators. On a semicircular table, about 20ft in length and 10ft broad at the centre, they exhibited in a most effective and elegant manner a large number of beautifully executed wedding designs—brides' and bridesmaids' bouquets of great richness and elegance, and of artistic combinations. One of various Cypripediums and green foliage, with ribbons of Royal blue, was greatly admired. Orchids, Lily of the Valley, Carnations, and choice Roses were used in great profusion. A large harp of golden Chrysanthemums foreground, lavishly decorated with Cattleya blooms, and festooned with russety Beech leaves, was marvellously effective. A muff of fairy flowers, sprayed with pink Carnations and Asparagus, was much admired. A silver wedding basket, with double heart, with dates painted on silk, was a source of great attraction. Two beautiful hearts, with doves and initials in Violets, were most effective. A horn of

plenty, in *Parmas* and *Lily*, and a fairy slipper in the same combination were noticeable among other appropriate devices. The whole was surmounted by a beautiful floral wedding bell—white, decorated with *Safrano* Roses. This was suspended from the roof of the building, and had an electric lamp as a tongue. This exhibit was the popular draw of the exhibition, and from the general visitors received great commendation. This exhibit was awarded the £20 prize as the most meritorious trade floral exhibit.

The exhibition was highly successful in a monetary point of view, the weather being ideal for November, while the splendid music of the Grenadier Guards' band drew crowds of visitors. The total drawings were £958 10s., exclusive of tickets sold outside, and the number of visitors during the three days were only a few short of 40,000.

### Sheffield, November 14th.

The annual show was held in the Cutlers' Hall, and in point of entries and quality of exhibits exceeded previous years, the first twenty-four incurveds in the open class being acknowledged as the finest board staged for years. The groups, although only two entries for the district class, showed a decided improvement, both in taste and quality of flowers. The groups for cottagers, of which there were five, were also superior to previous years. Table decoration, a feature only introduced last year, has seven competitors, and the evenness of the taste made judging somewhat difficult. Fruit and vegetables, the latter only inserted in the schedule this year, were very meritorious.

There were five exhibitors for twenty-four incurved blooms, not less than eighteen distinct varieties, the first prize going to Mr. Higgs, gardener to J. B. Hankey, Esq., Feteham. The back row flowers were: Frank Hammond, Mrs. F. Judson, Countess of Warwick, Madame Ferlat, Ialene, Chrysanthemiste Bruant, Duchess of Fife, and Salem; the second row: Ralph Hutton, Major Bonaffon, Egyptian, Topaze Oriental, Countess of Warwick, Comtesse d'Etoile, Ralph Hutton, and Mrs. H. J. Hutton; third row: Chas. Curtis, John Doughty, Duchess of Fife, G. Loek, Mrs. F. Judson, C. B. Whitnell, J. Agate, and C. Curtis. The second prize fell to Mr. C. Crooks, gardener to the Dowager Lady Hindlip, the back row flowers being very fine, and contained excellent samples of C. Curtis, Duchess of Fife (two), H. J. Jones, Nellie Stevens, Miss Nellie Threlfall, Nellie Southam, and Lady Isabel. The other rows were neat, fresh flowers, but smaller. The third prize was awarded to Mr. C. W. Findlow; fourth, Mr. C. Scott. In the class for twelve incurveds only two competed, the first going to Mr. Crooks, second Mr. F. J. Clark.

In the class for twenty-four Japanese, not less than eighteen distinct varieties, there were seven competitors, and very keen competition resulted. Mr. F. S. Vallis obtained first. His back row consisted of: Madame Carnot, Edwin Molyneux, Mrs. Mease, T. Carrington, Mrs. J. Lewis, Le Grand Dragon, Australie, Madame Carnot; second row: M. Louis Remy, Madame Paolo Radaelli (a very fine flower), Mrs. J. Bryant, F. S. Vallis, W. R. Church, Calvat's '99, Mrs. Greenfield, and Mons. Chenon de Leché; third row: Geo. Mileham, W. R. Church, Mrs. J. Lewis, Mrs. Barkley, Mrs. Mease, Edwin Molyneux, Madame Herrewé, and again Mrs. Barkley. The second prize went to Mr. Higgs, who staged good examples of Madame Carnot, Mrs. H. Weeks, Madame G. Debic, Florence Molyneux, Madame Herrewé, and J. T. Thorneycroft. Third, Mr. Alderman; fourth, Mr. F. J. Clark. In twelve Japs there was only one competitor, Mr. F. S. Vallis. In six Japs there was more competition, but Mr. Vallis again obtained first; second, Mr. Clark; and third, Mr. Crooks. In the class for affiliated societies, twenty-four blooms, twelve Japanese and twelve incurved, not less than eighteen distinct varieties, the first went to the Chesterfield Chrysanthemum Society, the second and third to local societies. There were five exhibitors.

Messrs. Peed, of London, showed fruit of most excellent quality, not for competition, whilst Mr. H. J. Jones and Mr. Wells also staged examples of new and older varieties of exhibition blooms. Groups not for competition were also shown by Mr. Hiram Shaw, nurseryman, and Mr. S. W. Seagreave, nurseryman, both of whom obtained a gold medal, as also did Mr. J. Artindale for floral decoration.

The cottagers' class, which is a great feature of the Sheffield Society, showed great competition, forty-seven boards of six blooms and an equal number of three blooms being staged. Seventeen cottagers also competed for the vase of Chrysanthemums with foliage, and generally the exhibits of cottagers showed a vast improvement on previous years.

### Bradford Chrysanthemum, November 14th and 15th.

The sixteenth annual exhibition promoted by the Bradford and District Chrysanthemum Society was held in St. George's Hall, Bradford. In the open classes the competitors were not only numerous, but some of the blooms which they sent in were by common consent the finest specimens of Chrysanthemums which have ever been seen at the Bradford Chrysanthemum Show.

The three exhibits arranged in competition for prizes offered

for a group of miscellaneous plants constituted a charming feature of the exhibition. The first prize in this class deservedly fell to Mr. William Taylor, gardener to Mr. George C. Waud, of Ferniehurst, Baildon, for a group most lightly and tastefully arranged, which contained some fine Orchids, including *Cattleya labiata*, *Oncidium varicosum* Rogersi, and a fine variety of *Odontoglossum*.

The principal prize in the show, a sum of £10 and the society's Challenge Cup, offered for a collection of twenty-four Japanese blooms, was won by Mr. A. Chandler, gardener to Mr. Arthur James, of Rugby, with a series of wonderfully fine blooms, including specimens of the well-known varieties: Ethel Fitzroy, Mrs. G. Mileham, M. Louis Remy, Lord Ludlow, M. Chenon de Leché, W. R. Church, Lady Hanham, Duchess of Sutherland, Le Grand Dragon, Madame R. Cadbury, Mrs. H. Weeks, Mrs. Barkley, Mafeking Hero, Mrs. J. Bryant, Sensation, Australie, Vicar of Leatherhead, and Calvat's '99. The second prize went to Mr. E. Ellis, of Heswall, Cheshire, for a collection which, though exceptionally strong, was quite justly placed second to Mr. Chandler's exhibit. The collection included the following varieties:—Mrs. Barkley, Marquis V. Venosta, Lord Ludlow, Madame G. Henry, and Miss A. Byron.

In the class for incurved blooms the first prize went to Mr. Charles Ritchings, gardener to Miss Baird, of Malvern, for a collection which contained uniformly large, close, and finely built blooms, including the following varieties: Fred Palmer, Lord Alcester, Miss A. Hills, R. G. Kingston, Golden Madame Ferlat, C. H. Curtis, White Empress, Violet Tomlin, Topaze Orientale, Hanwell Glory, Pearl Palace, Thomas Singleton, Nellie Threlfall, Mr. E. Bennell, L. Giles, and Chrysanthemiste Bruant, placed second and third respectively with excellent exhibits; and all three exhibitors were successful in the classes for smaller collections of blooms.

The local classes were less satisfactory. Lord Masham's cup, which had been won twice by Mr. John Thornton, of Drighlington, was wrested from that exhibitor by Messrs. Clark and Son, of Rodley. Mr. Mark Pemberton, of Milner Field, who took the first prize for twelve Japanese blooms, showed some blooms of excellent quality, and Mr. T. Wood, gardener to E. R. Firth, Esq., of Saltaire, also included in the collections, which secured two first prizes, some very fine blooms. Mr. J. W. Hatton, of Heaton, and Mr. J. Collinson, gardener to Major Mitchell, of Manningham, were the principal contributors.

The National Society's Certificate of Merit was awarded to Mr. Chandler, winner of the challenge cup, for the premier bloom in the exhibition. The winning flower was Ethel Fitzroy, a Japanese variety, orange amber in colour, of enormous size, and fully 6in in depth. Certificates were also awarded to Mr. Rudolf Eichel, Orchid grower, Gilstead, for a fine display of Orchids and other choice flowering plants, sent not for competition, and also to Mr. H. Dickinson, of Shardlow, Derbyshire, for a fine collection of Grapes. In the bouquets and cut flowers much artistic skill was displayed, the work of Mr. John Brooke, of Bradford, being deserving of special mention. The judges were Messrs. Moore, Wilson, Daniels, and Leadbetter. The exhibition was opened yesterday by the Mayor of Bradford (Alderman David Wade), Alderman Wright (chairman of the Parks and Cemeteries Committee) presiding. Mr. H. Spencer, of Horton, Bradford, as honorary secretary, deserves all thanks for his courtesy and energetic attentions to all around him.

### Swindon, November 14th and 15th.

That flowers have no charm for the thousands of G.W.R. employes was eloquently proved by their absence from such a bright, varied, and most excellent exhibition as that which the Swindon Society provided on the above dates. We can scarcely recall an instance where patronage was so grudgingly accorded, and yet, while the exhibition was still open, apparently thousands were traversing the streets with no definite object in view. Reverses are common, success scarcely known, and yet the society continue to persevere, with the hope of educating the populace towards a better appreciation of things floricultural. We hope they may yet succeed. Chrysanthemums necessarily comprise the chief classes as cut flowers and groups of plants.

A good class was made in that for twenty-four Japanese blooms, several competing. Mr. Coote, gardener to D'Arcy E. Taylor, Esq., Marshfield, was the winner of the first prize, with a fine stand of blooms. Particularly noticeable were Nellie Poekett, J. R. Upton, Lord Salisbury, Australie (extra), W. R. Church, Chas. Longley, and Matthew Smith. Mr. Strugnell was a good second, and Mr. Wright, gardener to R. Whitehead, Esq., third. The last named scored with twelve Japanese, distinct, staging fine blooms of Chenon de Leché, Mrs. G. Mileham, Swanley Giant (fine), and W. R. Church. Messrs. Coote and Bastin (gardener to Sir Alexander Henderson, Bart., Buseot Park) followed, also with good blooms. Mr. Bastin won with twelve incurved, distinct, showing very good flowers of General Symonds, Mrs. H. J. Jones, Mrs. W. C. Egan, and Madame Ferlat; Mr. Strugnell was second, in whose stand were fine blooms of Chas. Curtis, King of Yellows, Madame Ferlat, and Duchess of Fife; Mr. Wright was third. With six of one kind



the last named won with Mrs. Barkley, fine, but not developed; second, Mr. Bastin, with Mrs. Mease; third, Mr. Coote, with extra fine flowers of *Chenon de Leché*. There were also classes confined to district growers and amateurs, which displayed good culture, particularly in the latter section. In this the secretary and his son were successful in carrying off a first and second prize with excellent blooms.

For a group of *Chrysanthemums* Mr. Wheeler, gardener to Major Goddard, Swindon, was a very good first, blooms, arrangement, and finish being alike good. In the group of miscellaneous plants Mr. H. Wright showed a very bright and neatly executed arrangement of *Begonias*, *Carnations*, small, bright-leaved *Coleus*, and other plants in a groundwork of Fern. Mr. Bastin won with table plants; Messrs. R. Looms, Strugnell, and Wheeler with *Primulas*, *Cyclamen*, and *Begonias* respectively. Fruit was not extensively shown, but vegetables in collections were excellent, Onions, Cauliflowers, and Parsnips especially so.

Non-competitive exhibits from Messrs. Davis and Son, Swindon; Thos. Rigg, Reading; and R. Tucker and Son, Oxford, each contributing beautifully executed devices of the florists' art, and which helped to beautify the exhibition hall in a marked degree. Messrs. J. T. Bown and F. B. Davis are the joint secretaries, both gentlemen working assiduously to make the show interesting and successful, with but poor recompense from the Swindon public.

### Woolton, November 19th.

This excellent society fully maintained its high position as a show of great excellence. The aim of the stagers and exhibitors is to provide an exhibition of quality and artistic arrangement. In this they fully succeeded, having the credit of the prettiest show in the locality. To secure this very creditable position the following exhibitors were mainly responsible, and for which they secured first prize awards: F. H. Gossage, Esq. (gardener, Mr. J. Stoney), Woolton, twenty-four Japanese *Chrysanthemums*, dis. vars., of good size, depth, and freshness; twelve Japanese; five vases, containing good blooms; six vases of pretty single flowers; one Fern, with a fine *Goniophlebium subauriculatum*; one foliage, with a grand *Croton Montefontensis*, 7ft in diameter, superbly coloured; one Orchid, with *Cypripedium Spicerianum*, well flowered; two *Begonias*, fine quality; and vegetables. Sir W. H. Tate, Bart. (gardener, Mr. G. Haigh), Woolton, secured firsts for eighteen Japanese cut blooms of much merit; eighteen incurveds, massive deep blooms; one incurved *Chrysanthemum* plant, and six pots of *Cyclamen*. Mrs. Cope (gardener, Mr. T. Carling), Woolton, first for twelve incurved distinct; one Palm, with a fine *Kentia*; one flowering plant, with a good *Ixora coccinea*; one Orchid, with freely flowered *Cattleya labiata*. S. Sanday, Esq. (gardener, Mr. Jones), Woolton, for one basket and bouquet of *Chrysanthemums*. Mr. F. Stevens for sprays and buttonholes.

Mr. W. Wilson for one Japanese or reflexed *Chrysanthemum*; one pompon with a model trained variety; one *Anemone*, and six pots of single large flowered; two bunches black Grapes, with Black Alicante; two bunches white, with Muscat of Alexandria, of fine colour. P. W. Barr, Esq. (gardener, Mr. Keightley), Woolton, for three large flowering *Chrysanthemums*, remarkably well done, and for one single with a pretty variety. S. S. Bacon, Esq. (gardener, Mr. J. Rothwell), for Roman Hyacinths well flowered.

Col. R. Ireland-Blackburne (gardener, Mr. G. Hammond), Hale, contributed some fine fruit, winning for one dish dessert Apples; three culinary; three dessert; and single dish of Pears and one dish of stewing. Mr. T. Lunt, Halewood, staged some fine vegetables, winning the collection of eight kinds, and four other firsts. Mr. Brown secured the silver challenge cup, the gift of the treasurer, Neil Gossage, Esq., for six kinds of vegetables. Mr. J. G. Learoyd and his committee may be complimented upon their successful show.

### Bristol, November 19th and 20th.

The thirty-ninth exhibition held under the auspices of the Bristol *Chrysanthemum* Society on the above dates must be described as a great success, the large Colston Hall being thronged with visitors almost as soon as the doors were open, and the quality and number of exhibits being quite up to the usual high standard.

In the class for thirty-six Japanese cut blooms, Mr. F. S. Vallis won with a really superb stand. This noted grower also secured the special prize for the best exhibit in the show, and the medal of the National *Chrysanthemum* Society for the best bloom in the show, with the same stand. His varieties were Mrs. Mease, Mrs. Coombs, Madame Carnot, Mrs. Vallis, M. P. Radaelli, M. Pockett, Mrs. Barkley, Madame Louis Remy, T. Carrington, Mrs. Thirkell, Mrs. Stowe, J. Lewis, W. R. Church, Bessie Godfrey, Edwin Molyneux, H. E. Hammond, Madame R. Cadbury, G. J. Warren, Calvat's '99, Australie Mrs. B. Wilde, and Surprise. A more perfect stand would be difficult indeed to find. Mr. W. Macadam Smith had a very good stand for second place, but the flowers were not so large as Mr. Vallis'.

Mr. J. Runnacles was third, Mr. G. Drake fourth, F. W. Flight, Esq., fifth, and Mr. D. E. Taylor sixth.

For twenty-four large-flowered incurveds Mr. J. B. Hankey was first, his best flowers being *Ialene*, Duchess of Fife, Mrs. F. Judson, Countess of Warwick, J. Agate, Chas. Curtis, and Mrs. R. C. Kingston. Mr. W. G. Drake was a close second, Mr. Flight third. The smaller cut flower classes were well-filled, a very fine dozen being that with which Mr. Macadam Smith won in the class for twelve Japanese distinct.

The groups of *Chrysanthemums* were about as usual, made up of capital material, but hard and stiff in outline and a jumble of colours. Alderman Godwin, G. W. Harper, Esq., and Mrs. Vincent Ames were the principal prizewinners. For show plants Mr. J. West took first place, Sir Chas. Cove and Mrs. Coleman following in the order named. Ornamental foliage plants were well shown, as well as a fine lot of stove plants. Colonel Goss, Mr. F. Tagart, and Prince Hatzfeldt were amongst the winners in this section.

The fruit was one of the features of the show, some very fine Grapes for the late season being exhibited. For six dishes Mr. H. Jones won, Mr. F. Tagart and Colonel Vivian following. Alderman Davis' Muscats were very fine, while rarely is such a show of Apples and Pears seen as that which graced the tables here. Quite a number of vegetable classes were crowded out into the corridors, but the quality was so good that plenty of admiring visitors followed.

The wreath, bouquet, and table decorations are always well done in Bristol, and this year exhibitors surpassed even their previous efforts. In the hand bouquet class Mr. W. H. Coles' superb exhibit was greatly admired, while the veteran Mr. C. Winstone, Mrs. Rogers, and Messrs. Dobson and Co., all showed of their best.

In the grand tier were the Orchids and a number of trade exhibits, not for competition. Messrs. House and Son, of Westbury, had a fine exhibit of Violets, while the lovely *Carnations* put up by Mr. W. J. Godfrey came in for unstinted praise. This noted grower also put up a number of new and choice *Chrysanthemums*. Certificates for Orchids were awarded to Mr. Budgett for a magnificent variety of *Cypripedium insigne*, and to Mr. J. Barry for *Oncidium Forbesi*.

### Sutton Coldfield, November 19th and 20th.

The seventeenth annual exhibition of the Gardeners' Mutual Improvement Association was held on the above dates. Amongst the various non-competitive exhibits Mr. W. B. Grove, Wyndley Nurseries, Sutton Coldfield, arranged a collection of floral designs and plants. As usual, Mr. A. Jenkins, gardener to A. W. Wills, Esq., Claregate, Wyld Green, annexed first honours in the class for "a group of *Chrysanthemums* arranged for effect," and the National *Chrysanthemum* Society's Certificate of Merit was also bestowed upon Mr. Jenkins for the best exhibit of *Chrysanthemum* plants in the show (and the Silver Medal offered by Mr. H. J. Jones, Lewisham, to the same exhibitor for six blooms of *Chrysanthemums*, Japanese, any variety). The second prize fell to Mr. R. T. Parker, gardener to A. R. Dean, Esq., Moor Hall, Sutton Coldfield. In class 2 Mr. A. T. Frizwell, gardener to J. Bishop, Esq., Stanley House, Sutton Coldfield, was placed first for a worthy group of *Chrysanthemums*; second, Mr. W. Jones, gardener to Mrs. Hope, Doe Bank, Sutton Coldfield.

CUT BLOOMS made a brave show. For twelve Japs Mr. C. Link, gardener to the Trustees of Oscott College, Erdington, led with very good examples; second, Mr. F. Jackson, gardener to A. Pilkington, Esq., St. Bernard, Wyld Green. In the class for twelve incurveds, six varieties, Mr. A. Jenkins, the only exhibitor, was awarded the first prize. For six blooms, any variety, distinct, Mr. S. T. Parker secured the first prize; second, Mr. John Jones, gardener to Councillor T. Turner; and third, Mr. John Steeley, gardener to R. G. Blood, Esq., Erdington. For nine stems of natural grown *Chrysanthemums* Mr. A. Jenkins scored; Mr. F. Jackson second, and Mr. Joseph Walls, Little Aston Hall, third. For four bunches of single *Chrysanthemums* Mr. A. Jenkins led the way.

VEGETABLES.—Space will only allow of brief reference to this praiseworthy section of the show, and including as it did every class of exhibitor, with hardly a single inferior exhibit. For a collection of vegetables to be shown on the tables, 4ft by 3ft, and judged by points, and the prize money to be apportioned accordingly, Mr. C. Link, of Oscott College, scored with an admirable collection; second, Mr. Joseph Walls; and third, Mr. John Jones; an extra prize being awarded Mr. J. Steeley. For a collection of vegetables on a table 3ft by 3ft, Mr. A. Frizwell, Mr. F. Jackson, and Mr. W. Vaughan were placed as in order named. In class 48, for a collection, as per the last conditions, Mr. John Delville, Mr. Thos. Beavon, and Mr. W. Vaughan were the respective winners. Potatoes were shown in collections of six, four, two, and single dishes. For six varieties Mr. C. Link was to the fore with super-excellent examples of kidneys and rounds; second, Mr. John Melville; and third, Mr. J. Steeley.

For four varieties, two kidneys and two rounds, Mr. H. Fulford, Erdington, led. Apples and Pears, three dishes distinct, were exhibited by several competitors in fairly good form considering the district and the past untoward season. A Certificate of Merit was awarded to Mr. F. Jackson for two bunches of black Grapes.

### South Shields and Northern Counties, November 19th and 20th.

After a lapse of five years this society has sprung into life again with renewed energy, and held a magnificent show in the Royal Assembly Hall (a grand and spacious building) surrounded by all the associations of the past. Mr. Bernard Cowen, F.R.H.S., as hon. secretary; Mr. Thos. Binks, assistant hon. sec.; Councillor T. Whitfield, chairman of the committee; Mr. Alex Purvis, chairman of the General Purposes Committee; with the hon. treasurers, Mr. J. T. Reed and Mr. E. E. Walton, were one and all present, and assiduous in their endeavours to make the show a success. They were fortunate in securing James Readhead, Esq., J.P., as their President, who, in offering a Silver Coronation Cup of the value of £15 15s., a splendid work of art, proved his interest in the society. There were also no less than five other five guinea Coronation Cups offered, besides a beautiful gold cross medal, and other special prizes. The exhibition was opened with great éclat by the Mayor, Councillor J. Grant, who was introduced by the president, and accompanied by the Mayoress, Miss Grant, and Mrs. J. Readhead, who were each presented with splendid bouquets, and supported by a large number of the officials, with their ladies, which augurs well for the success of the exhibition.

**Cut Blooms.**—The principal interest was centred in the class for thirty-six Japanese, not less than eighteen varieties, the first prize being the President's Coronation Challenge Cup, valued £15 15s., and prizes of £6, £4, £2, and £1. This brought out the champion grower, Mr. F. S. Vallis, Bromham, Clippenham, who easily secured the first prize with a fine, solid, bright lot of the following: Madame Carnot (2), Calvat's Sun, Mrs. Barkley (2), Ed. Molyneux (2), T. Carrington (2), Mrs. J. Lewis (2), M. Louis Remy (2), M. Chenon de Leche (2), G. J. Warren (2), Chas. Longley, Calvat's '99, W. R. Church, Paola Radaelli (2), Mrs. Coombes (2), Mrs. Mileham, Mrs. Mease (2), Mrs. Hummell (2), Surpassé Amiral, Nellie Pockett (2), Ethel Fitzroy, C. J. Salter, W. R. Church, and Marquis V. Venosta (very large). The second prize fell to Mr. A. Findlay, The Gardens, Grey Towers, Nunthorpe, with a fresh, even stand. Third, Mr. Geo. Shotton, The Gardens, Swarland Hall, Northumberland. Fourth, Mr. MacDougall, gardener to H. Pease, Esq., Arcot Hall, Dudley, the latter being exhibited on too large a board, and many were past their best. (Mrs. Mease in Mr. Vallis' stand, was selected as the premier bloom in the exhibition, and won the bronze medal.)

In the class for eighteen Japs in twelve vars. Mr. Vallis was again first with a grand lot, composed chiefly of the same varieties as in the larger class, with the addition of the variety Guzie. The second prize was secured by Mr. A. Appleton, gardener to S. Spencer, Esq., Bellington. Mr. MacDougall third. For twelve Japs, Mr. A. Appleton was first; Mr. S. Sprout, gardener to John Whate, Esq., Low Fell, second; and Mr. MacDougall third.

The classes for incurveds were much weaker than the Japs, many of the blooms showing a want of finish, partly owing to the backward season. In the class for thirty-six, not less than eighteen vars., for which a Silver Coronation Cup, valued £5 5s., and prizes of £6, £4, £2, and £1 were offered, there were only two competitors, Mr. Shotton securing the first, and Mr. J. Coultas, gardener to W. Harding, Esq., Hollyhurst, Darlington, second. In the class for eighteen incurves Mr. G. Shotton was again first. There were some very good stands of Anemones and reflexed flowers shown by Mr. T. M. Petch, which secured the first prizes in each class.

**Group.**—For a group of Chrysanthemums and other flowering and foliage plants arranged for effect in a space 10ft by 6ft, a silver Coronation Cup, valued £5 5s., and prizes of £5, £3, and £1 10s. were offered. There were three competitors, and Mr. Geo. MacDougall secured the first with a showy group, that contained some bright Crotons and clean Palms, interspersed with Cyrtipediums, Begonias, Primulas, &c., in the front, with some fine blooms of Chrysanthemums arranged under a Palm at the back. The second was awarded to Mr. T. M. Petch, gardener to Mrs. Rennington, Mona House, Sutton-on-Hull, with a lighter arrangement, the Cocos Palm being elevated on cork, and dells formed of low growing plants, edged with Cineraria maritima; but there was a sad lack of colour and brightness in the whole arrangement. The group of Mr. T. Reay, which contained some fine Chrysanthemum blooms, was placed third.

**Bouquets and Epergnes.**—The bouquets exhibited at South Shields are generally of exceptional merit; the display is such as is rarely seen South. This year they were quite up to the standard, being marvels of artistic skill, and formed quite an exhibition in themselves.

For a hand bouquet, Mr. James Summers, Florist, Sunder-

land, was first with a choice arrangement, containing flowing sprays of Oncidium varicosum, Odontoglossums, Cattleyas, Dendrobiums, Pancratiums, &c. Miss Battenby, Hagg Hill, Blaydon, second, with a similar arrangement of choice flowers: with Miss Dora Summers third.

In the class for bridal bouquets the same taste was displayed, and the prizetakers followed in the same order, the competition being very close. The epergnes were also of the very choicest, Cattleyas, Oncidium, Cyrtipediums, Odontoglossums, and other Orchids lightly and elegantly arranged formed an exquisite combination, the whole being very attractive to the large number of visitors. Mrs. James Summers, Miss Battenby, and Miss Dora Summers being successful in the epergne classes, and also for sprays and buttonholes. Messrs. Clibran and Son, Manchester, exhibited a non-competitive group of cut blooms of Chrysanthemums in vases, pots of Lily of the Valley and Celosias forming a bright and attractive display in front of the orchestra. Messrs. Ord, of North Shields, also exhibited a fine bank of plants and flowers. Some good Grapes and vegetables were shown, but the competition for these was not so strong as in former years. The judges were Mr. Geo. Gordon, V.M.H. and Mr. C. Orchard, F.R.H.S., Bembridge, I.W.

### Dulwich Chrysanthemum, Nov. 11th, 12th, and 13th.

The ninth annual exhibition of the Dulwich Chrysanthemum Society may again be recorded as a great success. Over 2,000 people, irrespective of members, visited the show during the three days. A larger number of entries were received than ever before, and the competition throughout was very keen. One hundred and twenty-four exhibits were staged in thirty-three classes by no less than fifty different members. The Coronation classes for twelve Japanese blooms in four vases, three blooms of one variety in each, brought up some fine exhibits. The gardeners' section, with four entries, had Mr. W. Taylor first (gold medal presented by Norman Davis, Esq.), Mr. A. Winter second, and Mr. A. M. Falkner third; while in the amateurs' section Mr. A. M. Falkner was first and Mr. A. Shinn second. Mrs. Mileham, Miss Alice Byron, and W. R. Church being very strongly represented in these classes.

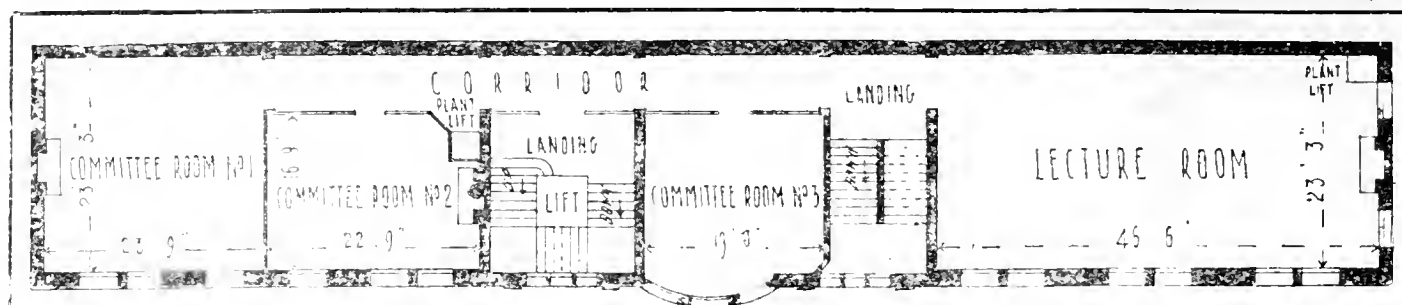
The large gardeners' groups showed a falling off in numbers, but the quality left nothing to be desired. Mr. A. Winter, gardener to E. Manwaring, Esq., of Elm Lodge, College Road, Dulwich, was again first, and Mr. G. Houlton second. Mr. A. Winter was also second for twelve Japanese, second for six Japs, one variety, third for vase of seven blooms, and third for one Japanese and one incurved, as well as second in Coronation Class. Mr. W. Taylor, gardener to C. Bayer, Esq., of Tewkesbury Lodge, Forest Hill, secured firsts for twelve Japanese and vase of seven blooms, as well as the Coronation class, second for one Japanese and one incurved, and thirds for six bush plants, six foliage plants and basket of Chrysanthemums. Mr. T. Martin, gardener to W. Harvey, Esq., Fairfield, Dulwich Village, won firsts with six bush plants, six Japanese distinct, six Japanese, one variety, six Anemones, and one Japanese and one incurved, and second for vase of seven blooms. Other prominent prizetakers in the gardeners' classes were Messrs. G. Houlton, C. Bellis, and E. Rea.

Amongst the amateurs, Mr. A. M. Falkner was again facile princeps, for besides winning the Amateur Coronation class and taking a third in the Gardeners' Coronation class, he took firsts for six incurves, vase of six blooms, one Japanese and one incurved, and for basket of Chrysanthemums he was first in both amateur and gardeners' section; the basket shown in the latter eliciting well-deserved commendation from the judges.

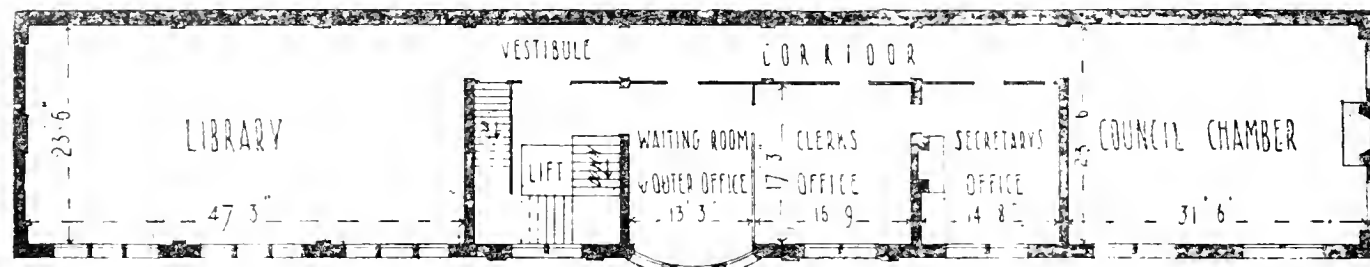
The large amateur groups were again strongly represented, Mr. R. J. Starsmeare winning with a very good group, with Mr. H. F. Foster and Mr. T. Bradbury second and third respectively. The groups of twenty-four plants brought up a very strong entry, Mr. J. Tavener winning, with Mr. H. Wells second, and Mr. R. Parfitt third out of six entries. The amateurs were very strongly represented amongst cut blooms, and the quality was throughout good. Mr. C. W. A. Banks was first for twelve Japs, and Mr. H. Wells for six Japs. Amongst the novices Mr. J. Falkner was prominent in all the classes, and the keenest of competition was shown, three out of the four classes bringing up from seven to nine entries.

Perhaps the feature of the show which produced the greatest improvement was the decorative classes, four to five entries being staged in each of the five classes devoted to epergnes and baskets, the effect produced being a very striking one, and the quality of the exhibits exceptionally meritorious. The Florence Molyneux exhibited by Mr. A. Winter was judged the premier bloom, and C. H. Curtis, shown by Mr. A. M. Falkner, the best in the amateur section, and James Bidencope, shown by Mr. J. Falkner, the best novices' bloom. A large group of Chrysanthemums, staged by Mr. R. Forster, of Nunhead Cemetery, received a well-deserved silver-gilt medal. The platform decorations by Messrs. Peed received a similar award. The judging, which was in the able hands of Messrs. Waterer and Norman Davis, it need hardly be said, gave the greatest satisfaction.

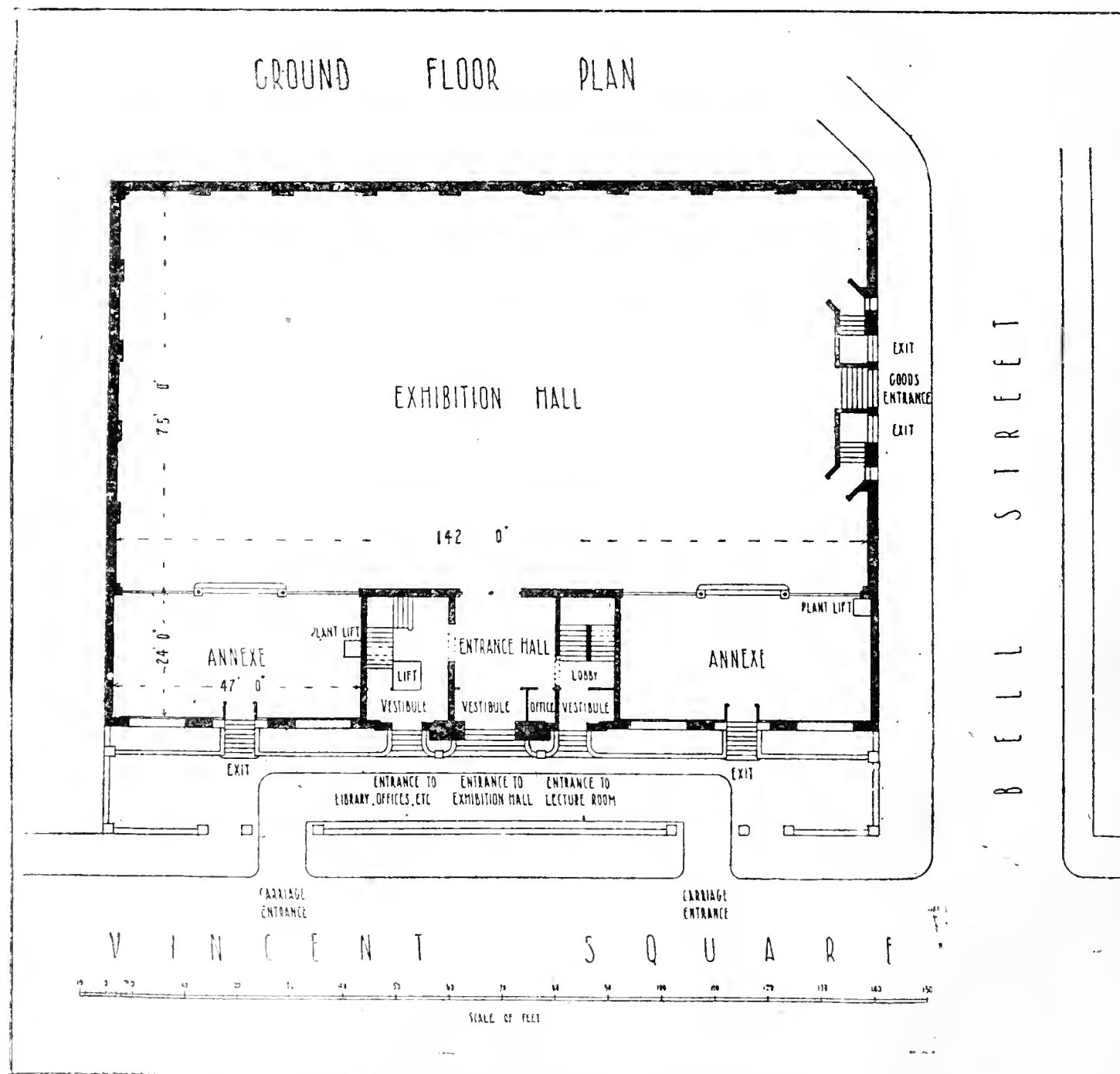




FIRST FLOOR PLAN



SECOND FLOOR PLAN



Plans of the Royal Horticultural Society's Proposed Hall.



### Hardy Fruit Garden.

**RASPBERRIES.**—The best of the numerous suckers which may now be found in the Raspberry quarters can be utilised for forming a new plantation. The strong, succulent-looking canes are not really the best for planting, because they are not so well furnished with fibrous roots, but have long, thick roots, prone to descend and make growth in the subsoil rather than branch out laterally and multiply into a number of fibres. The smaller and thin-looking canes, on the other hand, have abundance of these desirable fibrous roots, and as these are much more serviceable for the future welfare of the plants, by all means select canes of this character for planting. They are chiefly to be found at some distances away from the main stools. The readiest manner of selecting, however, is to lift all the suckers and pick out the best for planting, laying them in to keep the roots from drying. In addition to the removal of suckers from between the clumps or rows of Raspberries, the canes should be thinned out, retaining the strongest and most vigorous for future bearing. The weak canes in this case are not desirable. When in lines the canes may be left, so that they can be tied in to about 6in apart. In clumps, five or six strong canes are sufficient. Side shoots have in some cases started from the canes. These must be shortened back to the leaf axils. Canes should not be left to their full extent, as their upper parts are attenuated and fail to ripen. It is usual to shorten them to the tops of the stakes or trellis, which are about 5ft high. The canes are or ought to be well ripened to this point. After pruning and cleaning established quarters, spread over the soil between the plants a liberal mulching of rich manure. During mild periods in winter liquid manure may be applied to the soil with beneficial results.

**PLANTING GOOSEBERRIES.**—In preparing the soil for these the treatment must be generous in every respect. Deeply dig or trench the ground and loosen the subsoil. Intermix thoroughly decomposed manure with the soil, which should be broken up and pulverised when in a half dry condition. Small bushes, two or three years old, are the best for forming a plantation. Though the trees look small when planting, they should be inserted at a distance which does not permit of ultimate crowding. Six feet apart is a suitable distance. For a year or two other crops of an annual character may be grown between, or a row of Strawberries. Gooseberries, with single, double, or triple stems, are admirably adapted for wall or fence planting. They may be grown in this manner where space is limited, or to supplement the ordinary plantations of bush specimens. Walls of any aspect can be furnished, but it is usual to grow them on north or east walls, so that a late crop may be secured.

**THE METHOD OF TRAINING** may be upright, each branch or cordon having a space of 6in between it and the next. As the growth of Gooseberries is vigorous, especially in good soil, three-branched cordons are practically the best, and should be inserted 18in apart. Single cordons, of course, only 6in. Side shoots are produced freely each season, and must be summer-pruned to six leaves, as a means of concentrating the vigour in the basal buds, furthering shortening in winter to about an inch. The method of pruning for bush trees may be less formal, allowing a larger number of young shoots to extend, removing the extreme or unripened tips. Keep the bushes fairly well open in the centre, and prevent the branches touching the ground by clearing away the lower growths. Where plantations of Gooseberries have in former years been planted thickly it is desirable to thin the trees themselves out previous to severely pruning.

**RED AND WHITE CURRANTS.**—The details of culture as regards these fruits are precisely the same as for Gooseberries, with the exception that the annual winter pruning is based on one special line of treatment only. This consists of originating while the trees or bushes are young, a definite number of branches, five or seven being a suitable number to form a medium-sized bush. These main branches may each year have the leading shoot encouraged to extend during the summer, but in the winter shorten back to 10in. On the older part of the same branch side shoots push, as they are encouraged to do so by the shortening of the leader previously. The side shoots must be summer-pruned, as described for cordon Gooseberries, and in winter be similarly pruned or spurred in. Red Currants are excellent for cordon treatment on walls and fences.

**BLACK CURRANTS.**—These are only profitable on the bush system, so that young wood may be freely produced, and a good

selection of it retained annually for fruiting. The older parts of trees, or the previous season's bearing growths, may be cut out. Plant two or three year old bushes on ground prepared as for Gooseberries, and at similar distances apart. When bushes cease to produce strong young shoots they are not profitable.—EAST KENT.

### Fruit Forcing.

**CUCUMBERS.**—At this time of year continued firing is needful, and where the heat is radiated at a high temperature the atmosphere is dried more than is good for the plants, either at the roots, when the beds are near the hot-water pipes, or the foliage in the immediate vicinity. In consequence of these circumstances the roots become stunted and swell irregularly. Careful attention to watering and damping is the only palliative under such conditions. Ventilation also needs careful attention, affording it whenever a favourable opportunity offers, but excluding air when the external atmosphere is sharp and cold. In bright weather turn off the top heat when the sun is powerful and likely to raise the temperature above 85deg or 90deg in such weather, damping the house morning and afternoon, and closing early. In damping care must be taken not to wet the embryo fruits, as they will damp off if water remains on them or hangs from their points for any length of time. Water will be required at the roots about twice a week. Maintain a temperature of 60deg to 65deg at night and 70deg to 75deg by day.

**WINTER FRUITERS** or plants from August or September sowings, having grown to the extent of the trellis, will have produced some, and have abundance of fruits showing or swelling. It is not, however, a good plan to allow the plants to bear to any great extent for some time, unless there is a pressing demand for fruit, and then the cropping will tell disastrously on the supplies later. Winter Cucumber plants cannot be too sturdy in growth and too thick and leathery in the leaves, but they may be too luxuriant, and in that condition highly susceptible of atmospheric changes. Attend to stopping and tying frequently, thinning to avoid overcrowding, allowing space for the unshaded development of the foliage. If canker appears in the stem, subdue by rubbing quicklime into the affected part, removing bad leaf and decayed growth promptly, rubbing a bit of the lime on the wounds. If mildew appear, dust with flowers of sulphur, it being well to dust some over the plants with a view to its prevention.

**WHEN WHITE FLY IS FIRST SEEN**, a little sulphur, formed into a cream with skim milk, should be brushed on the hot-water pipes; this is equally effective against mildew and "spot" fungus, which sometimes causes brown streaks and spots on the fruits, and then they grow crooked and have hard flesh in places. Sulphur fumes are also disagreeable to red spider, and in nowise inimical to Cucumbers unless the pipes are too highly heated and the fumes given off for a prolonged period at a high temperature. Aphides should be destroyed by vapourisation with nicotine or fumigation with tobacco, being careful not to give too much vapour or smoke. It is best to vapourise or fumigate on two or three successive evenings moderately, or, preferably, follow the evening with early morning treatment, choosing calm weather.

**MELONS.**—Fruits on the latest plants are beginning to net and will be ripe during December. To swell them off they require a rather moist genial condition of the atmosphere, damping the house in the morning and early afternoon, admitting a little air early in the forenoon to insure the dispersion of moisture and induce evaporation from the foliage. Maintain the night temperature at 60deg to 65deg, 70deg to 75deg by day, advancing to 85deg or 90deg, and as much as can be had, after the sun passes the meridian. The plants should have liquid manure about once a week. Plants that set the fruit in September are now ripening. The house should have air constantly, and a temperature of 70deg to 75deg by day, and more heat, with a free ventilation, when the external conditions are favourable, yet husbanding the sun heat, but not closing the house, withholding water from the atmosphere and roots. Fruit, though not of high flavour, proves acceptable from variety at this time and up to Christmas or later.

**PEACHES AND NECTARINES: EARLIEST HOUSE.**—To have ripe fruit in April or early in May a start should be made at the beginning of next month. Alexander and Waterloo, both very early varieties of Peaches, giving fruit about three weeks earlier than Early Louise, and a month or more before Stirling Castle and Royal George. Of Nectarines Cardinal is the earliest, and forces admirably. The trees having been at rest some time, and previously forced, will start promptly, but those not before started early will not respond so quickly; therefore, the house should be kept close, but admitting air freely above 50deg, employing fire heat only to prevent the temperature falling below 35deg. The more slowly the trees are excited the stronger will be the blossoms. The outside border must be protected to exclude frost, for the roots cannot absorb nourishment from the



soil when it is frozen. A thorough soaking of water should be given to the inside border, though this will not be necessary where the roof lights have been off some time; and if the trees are weakly a soaking of liquid manure (not too strong) will tend to a more vigorous break. Sprinkle the trees in the morning and afternoon of bright days, but do not keep them dripping with moisture, especially at nights, for this has a weakening tendency, and tends to encourage wood rather than blossom development.

**SUCCESSION HOUSES.**—All the leaves are off the trees except in the latest house, where they still hang somewhat unduly, probably from the dull and wet weather, also absence of frost, but they should not be forcibly removed. When, however, they come easily by brushing with the hand or a light broom the process may be assisted, and when they are all off, unfasten the trees from the trellis, prune them, cleanse the house thoroughly, and, if needed, paint the woodwork, ironwork, and the trellis. Wash the trees with soapy water, and afterwards dress them with an improved insecticide, but do not dislocate the buds. Tie the trees to the trellis, leaving room for the branches to swell. Remove the loose surface soil and supply fresh, giving a top-dressing of some approved fertiliser, and supply water to the inside borders, so as to keep them thoroughly moistened down to the drainage. Keep the atmosphere of the houses as cool as possible.

**LIFTING AND ROOT-PRUNING FRESH TREES.**—Any lifting, root-pruning, or other root requirements of the trees should be attended to without delay; but it is not safe to interfere with too vigorous trees until the leaves are all down or nearly so, a few soft growths, especially laterals, being of no consequence, as they will have to be removed. The introduction of fresh trees should be performed at once, the planting being proceeded with as soon as the leaves are off. Trees for houses are best if trained for two or three years to walls or under glass, those of five or more years moving safely if prepared for lifting by digging round them, so as to cause the production of fibres, a year previously. Such trees can be lifted with abundance of roots, and, being carefully planted, they force readily the first season, and the results are satisfactory, provided they are not brought on too rapidly, and a moderate crop taken. It is always preferable to select trees coming into profit, as young ones do not fruit much the first two or three years; hence the advantage of planting trees in a bearing condition.—ST. ALBANS.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.         | Direction of<br>Wind. | Temperature of the<br>Air. |              |              |              | Rain.          | Temperature of<br>the Soil.<br>At 9 A.M. |                      |                      | Lowest<br>Temperature<br>on Grass. |
|---------------|-----------------------|----------------------------|--------------|--------------|--------------|----------------|--|----------------------|----------------------|------------------------------------|
|               |                       | At 9 A.M.                  |              | Day.         | Night        |                | At<br>1-ft.<br>deep.                     | At<br>2-ft.<br>deep. | At<br>4-ft.<br>deep. |                                    |
|               |                       | Dry<br>Bulb.               | Wet<br>Bulb. | Highest.     | Lowest.      |                |  |                      |                      |                                    |
| 1902.         |                       |                            |              |              |              |                |  |                      |                      |                                    |
| November.     |                       |                            |              |              |              |                |  |                      |                      |                                    |
| Sunday ...16  | S.E.                  | deg.<br>42.2               | deg.<br>38.6 | deg.<br>44.9 | deg.<br>41.6 | Ins.<br>—      | deg.<br>46.2                             | deg.<br>48.7         | deg.<br>51.1         | deg.<br>39.2                       |
| Monday ...17  | S.E.                  | 39.7                       | 37.3         | 43.9         | 35.7         | —              | 44.6                                     | 48.3                 | 51.0                 | 23.1                               |
| Tuesday ...18 | E.N.E.                | 34.8                       | 32.9         | 40.4         | 33.9         | —              | 42.4                                     | 47.8                 | 50.8                 | 24.6                               |
| Wednesday 19  | E.N.E.                | 33.8                       | 32.9         | 37.0         | 33.2         | —              | 40.9                                     | 46.6                 | 50.5                 | 23.5                               |
| Thursday 20   | E.N.E.                | 34.0                       | 32.8         | 35.0         | 32.5         | —              | 40.1                                     | 45.8                 | 50.2                 | 30.8                               |
| Friday ...21  | N.E.                  | 33.5                       | 32.5         | 39.1         | 29.0         | —              | 39.4                                     | 45.3                 | 50.0                 | 25.6                               |
| Saturday 22   | S.E.                  | 34.7                       | 32.6         | 43.6         | 32.2         | 0.03           | 39.2                                     | 44.7                 | 49.5                 | 25.0                               |
| MEANS ...     |                       | 36.1                       | 34.2         | 40.6         | 34.0         | Total.<br>0.03 | 41.8                                     | 46.7                 | 50.4                 | 28.1                               |

A very dull dark week, with cold east wind.

### Trade Catalogues Received.

Clibrans, Altrincham.—1, *Select List of Chrysanthemums*; 2, *Trees and Shrubs, Roses and Fruits*.

M. Herb (Herb and Wulle), Seed and Bulb Grower, Naples, Italy.—*General Catalogue of Seeds*.

Hogg and Wood, Nurserymen and Seedsmen, Coldstream and Duns, N.B.—*Nursery Stock*.

A. C. Rogers, F.R.H.S., Camp Vale, Sheakespeare Avenue, Portwood Road, Southampton.—*Trees and Shrubs, Roses, &c.*



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

### Plan of a Bothy Competition.

"Well-wisher" promises a first prize of £3, and the Editor supplies a second prize of £1.

The rules of the competition are as follows:—The plan, drawn to scale, must not exceed 7in broad by 7in deep, and must be clearly defined on stout paper. The plan must provide suitable accommodation for six men, and the cost of the building ought not to exceed £200 to £220. A statement of the general items of cost should accompany the plans, together with any written comments thereon. The competition is open until Christmas, 1902, by which date all plans must be in the hands of the Editor. The sender's name and full address should be enclosed when sending the plan, and the sender will alone be held responsible for it.

**MILK? BUTTER? CHEESE?**—In the article under this heading on page 486, line 24, sec. col., last week, the sentence beginning: "The milkman is always in trouble," should be "in touch."

**CERATONIA SILIQUA (D. W.).**—Gerarde says:—"I have sown the seeds in my garden, where they have prospered exceedingly well. It has often been grown in South England on south walls, and you might try it, but there is not much prospect of its surviving severe winters."

**ARTIFICIAL MANURE FOR LAND CONTAINING MUCH CHALK OR LIME (A. Weekly Reader).**—Nitrate of soda, 2 parts; dried blood, 2 parts; dried fish, 2 parts; steamed bone-meal, 4 parts; superphosphate, 4 parts; nitrate of potash, 2 parts; and wood ashes, 4 parts, mixed. This mixture contains  $3\frac{1}{2}$  per cent. of nitrogen,  $7\frac{1}{2}$  per cent. phosphoric acid, and  $6\frac{1}{2}$  per cent. of potash. It may be used at the rate of 5 to 10 cwt. per acre,  $3\frac{1}{2}$  to 7lb per rod, for gardens, or  $2\frac{1}{2}$  to 5 cwt. per acre for field crops. The blood and fish should be ground and the nitrate crushed, the wood ashes facilitating the mixing and distribution of the fertiliser, as well as supplying sound potash and phosphoric acid.

**SPORTING OF CHRYSANTHEMUMS (J. H. S.).**—No one has yet given a satisfactory explanation of sports, and certainly that of its being due to fertilisation of the flower is remarkable, and our experience negatives the dictum, as we have had many sports from plants the parents of which had not their flowers fertilised artificially; and if so, naturally the flowered stems were cut off as soon as the flowers faded, thus giving little opportunity of the sap descending to the rootstocks and changing the nature of the sap and characteristics of the suckers. No doubt fertilisation results in sports, but it is often embryonic plant in the seed, and the plant from it may vary from one or both parents, and even afterwards give rise to other variations, termed sports, common not only to plants resulting from cross-fertilisation and in varieties most advanced in the florist's estimation, but also in species, hence certain parts of an Oak producing green leaves may and do produce silver or golden variegated leaves, even the common Holly producing variegated parts in a state of nature, and no one knows or has explained why.

**CARNATION LEAVES DISEASED (C. C.).**—The leaves are infested with the black mould known scientifically as *Macrosporium nobile*, and commonly as "spit" fungus. It has been very common this season, both outdoors and under glass, and this probably from the dull and cold and wet nature of the summer. The spots are irregularly scattered, and the mycelium of the fungus is widely diffused in the tissues before the discoloured spots appear on one or both surfaces of the leaf or even stem, and on these are produced still darker minute specks, which represent clusters of conidia, or spores, by which the disease is spread in summer, or even in winter under glass. Later in the season numerous minute black sclerotia are embedded in the diseased parts of the plant, and these carry over the disease so that it starts anew the following summer. Spraying the plants with a solution of ammoniacal carbonate of copper, or of potassium sulphide, arrests the spread of the disease. Potassium sulphide should first be dissolved in hot water, say  $\frac{1}{2}$  oz in a pint of hot water, and when dissolved dilute with cold soft water to 1 gal. All diseased parts or leaves should be picked or cut off and burned, thus preventing the formation of sclerotia.

**SCOTS FIR COVERED WITH IVY** (Subscriber).—As the Scots Fir is considerably over a century old, and the bole and some of the branches covered with Ivy, thus asserting its supremacy as a "parasite of support" to such extent that some of the branches are dying, we do not think it would be good policy to cut away the Ivy, as the Scots Fir is not likely to recuperate much, if any, in consequence, therefore the better plan would be to leave the tree in its glory of age, and thus prolong the feature as long a period as possible. With the Ivy the Scots Fir would probably linger on some time, and the Ivy would gain correspondingly, and be for some time after the demise of the Scots Fir an evergreen feature of no little interest and beauty. Spare both Scots Fir and Ivy.

**FURNACE OF WATERWAY END SADDLE BOILER NOT DRAWING** (S. J. D.).—So far as we can make out from your rough sketch, the boiler does not draw simply because the bottoms of the side flues are below that of the openings at the sides of the boiler, this causing a check on the draught; otherwise the setting appears all right, the flues (6in) being wide enough, and not being more in depth than 1ft there will be a rise at the doorway end from the side flues into the over-boiler flue, and thus an equal flue space being allowed at the doorway end of the boiler as in the side flues, and the over-boiler flue not throttled where it passes into the chimney, we do not see why the boiler should not draw. The damper, of course, will be in the chimney, and is best at least a foot above the over-boiler flue. The flues will follow the course of the boiler, and they should be properly separated—the side flues from the over-boiler one.

**NAMES OF FRUITS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (E. W.).—1, Northern Sweet; 2, King of the Pippins; 3, Northern Greening; 4, Alfriston; 5, Potts's Seedling; 6, Withington Fillbasket.

**NAMES OF PLANTS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (J. B.).—1, *Luculia gratissima*; 2, *Tibouchina macrantha*; 3, *Acacia platyptera*; 4, *Rhodochiton volubile*; 5, *Gymnogramma grandiceps*. (Fern-lover).—1, *Platynerium alcicorne*; 2, *Davallia hirta cristata*; 3, *Nephrolepis pectinata*. (N. T.).—1, *Garrya elliptica*; 2, *Azara microphylla*; 3, a Birch; 4, *Daphne Laureola*. (D. G., Yorks).—1, Rose, probably Mrs. Mawley (send to a specialist); 2, *Hibiscus syriacus*; 3, not recognised. (B. B.).—1 and 3, useless for naming by; 2, *Tradescantia virginica*; 4, *Daphne Mezereum*.

## Covent Garden Market.—November 26th.

### Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                         | s. | d. | s. | d. |                            | s. | d. | s. | d. |
|-------------------------|----|----|----|----|----------------------------|----|----|----|----|
| Aralias, doz. ...       | 5  | 0  | 12 | 0  | Ficus elastica, doz. ...   | 9  | 0  | 12 | 0  |
| Araucaria, doz. ...     | 12 | 0  | 30 | 0  | Foliage plants, var, each  | 1  | 0  | 5  | 0  |
| Aspidistra, doz. ...    | 18 | 0  | 36 | 0  | Grevilleas, 48's, doz. ... | 5  | 0  | 0  | 0  |
| Chrysanthemums ...      | 6  | 0  | 12 | 0  | Lycopodiums, doz. ...      | 3  | 0  | 0  | 0  |
| Crotons, doz. ...       | 18 | 0  | 30 | 0  | Marguerite Daisy, doz.     | 4  | 0  | 6  | 0  |
| Cyperus alternifolius   |    |    |    |    | Myrtles, doz. ...          | 6  | 0  | 9  | 6  |
| doz. ...                | 4  | 0  | 5  | 0  | Palms, in var., doz. ...   | 15 | 0  | 30 | 0  |
| Dracæna, var., doz. ... | 12 | 0  | 30 | 0  | „ specimens ...            | 21 | 0  | 63 | 0  |
| „ viridis, doz. .       | 9  | 0  | 18 | 0  | Pandanus Veitchi, 48's,    |    |    |    |    |
| Erica gracilis ...      | 8  | 0  | 9  | 0  | doz. ...                   | 24 | 0  | 30 | 0  |
| „ hyemalis ...          | 10 | 0  | 12 | 0  | Primulas ...               | 4  | 0  | 5  | 0  |
| „ Caffra ...            | 12 | 0  | 15 | 0  | Shrubs, in pots ...        | 4  | 0  | 6  | 0  |
| Ferns, var., doz. ...   | 4  | 0  | 18 | 0  | Solanums ...               | 5  | 0  | 8  | 0  |
| „ small, 100 ...        | 10 | 0  | 16 | 0  |                            |    |    |    |    |

### Average Wholesale Prices.—Cut Flowers

|                           | s. d. | s. d.  |      | s. d.                    | s. d.       |
|---------------------------|-------|--------|------|--------------------------|-------------|
| Arums, doz. ... ..        | 4     | 0 to 0 | 0    | Lily of Valley, 12 bnchs | 9 0 to 18 0 |
| Asparagus, Fern, bnch.    | 1     | 0      | 2 0  | Maidenhair Fern, doz.    |             |
| Bouvardia, coloured,      |       |        |      | bnchs. ... ..            | 5 0 6 0     |
| doz. bunches ... ..       | 6     | 0      | 8 0  | Marguerites, white,      |             |
| Carnations, 12 blooms     | 1     | 3      | 1 9  | doz. bnchs. ... ..       | 3 0 4 0     |
| Cattleyas, doz. ... ..    | 9     | 0      | 10 0 | ,, yellow, doz. bnchs.   | 1 6 2 0     |
| Chrysanthemums, doz.      |       |        |      | Myrtle, English, per     |             |
| bun. ... ..               | 3     | 0      | 6 0  | bunch ... ..             | 0 6 0 0     |
| ,, doz. blooms            | 1     | 0      | 4 0  | Odontoglossums ... ..    | 4 0 5 0     |
| Croton foliage, bun. ...  | 0     | 9      | 1 0  | Orange blossom, bunch    | 2 0 0 0     |
| Cycas leaves, each ...    | 0     | 9      | 1 6  | Roses, Niphetos, white,  |             |
| Cypripediums, doz. ...    | 2     | 0      | 3 0  | doz. ... ..              | 1 6 2 6     |
| Eucharis, doz. ... ..     | 3     | 0      | 0 0  | ,, pink, doz. ... ..     | 2 0 3 0     |
| Gardenias, doz. ... ..    | 4     | 0      | 5 0  | ,, yellow, doz. (Perles) | 1 6 3 0     |
| Geranium, scarlet, doz.   |       |        |      | ,, Generals... ..        | 0 0 0 0     |
| bnchs. ... ..             | 4     | 0      | 5 0  | Smilax, bunch ... ..     | 2 6 0 0     |
| Ivy leaves, doz. bun. ... | 1     | 6      | 0 0  | Stephanotis, doz. pips   | 0 0 0 0     |
| Lilium Harrisii ... ..    | 3     | 0      | 4 0  | Tuberose, dozen... ..    | 0 9 1 0     |
| ,, lancifolium alb. ...   | 1     | 6      | 2 0  | Violets, doz. bun. ...   | 1 0 1 6     |
| ,, l. rubrum... ..        | 2     | 0      | 0 0  | ,, Marie Louise... ..    | 3 0 4 0     |
| ,, longiflorum ... ..     | 3     | 0      | 4 0  |                          |             |



## The Winter Quarter.

The problem how to keep down expenses and still keep up the work of the farm during the winter quarter is the most difficult that the modern farmer has to solve. Horses have to be fed whether they are working or not, and the profitable use of farm horses has a very close relation to the successful cultivation of arable land. On very few farms nowadays is the horse-power an ample one; that is, sufficient for all purposes and a little to spare. We can remember the time when farmers could afford to keep their stables full of good horses, many of them eating their heads off in the way or corn; but matters are sadly different now, and every quarter of horse corn must be strictly accounted for if the balance sheet is to present anything like a decent appearance.

The first lesson to be learned from this is that we must keep no more horses than necessary; at any rate, at work, and if we keep horses in idleness they must either be breeding mares of high pedigree or young growing colts not yet mature for much work. Days are too short to admit of a full tale of work, and unless the weather be very cold the proportion between food and work may be maintained by reducing the corn allowance. This often is as much as 14lb per day when the horses are working hard; but it may be reduced to 10lb until February 1, and then gradually increased again. Twenty-eight pounds per week, costing about 1s. 9d., does not appear much, and there are plenty of people who would consider it not worth bothering about; but it is useless for us to grumble about farming being unremunerative unless we do our best in every way to make it otherwise.

If a farmer is working twelve horses he will save one guinea per week, or thirteen guineas in the quarter, by their reducing the winter corn, and thirteen guineas is not easily earned by agriculture. When reducing the corn, however, we should somewhat change its character. During winter horses require more fattening food, and we should reduce the bran to the smallest allowance. Split Maize mixed with a smaller quantity of Wheat or Barleymeal, say two-thirds to one, would not be too heavy a food for good constituted animals. For those which are subject to outbreaks of humour the use of bran should be continued. In districts where the annual servants' hiring take place at Martinmas it is not uncommon nowadays for a farmer to turn two or three horses into a yard or paddock for a rest on cheap rations until the days materially lengthen. They hire a man less than usual, and thus save his wages for two or three months until the horses are again put into work. This plan is a useful one where several two-year-old colts or fillies are included in the team. Winter is the time when they are of the least use, and so they can well be spared. But much depends on the state of the farm work, whether it is forward or the contrary, as it is very unwise to reduce the working staff when much remains to be done.

It is not strange that farmers complain of labour being costly and difficult to obtain when they so often make wasteful use of it. Only the other day we noticed three ploughs at work on a piece of stubble land. One was a digger with a chilled breast; the other two were old fashioned wooden swing ploughs. The work done by the digger contrasted most favourably with that by the others, and on examination of the furrows showed that it was doing nearly as much work as the two put together. The foreman who was in the field explained that the swing ploughs were used because he only had one digger available. The saving was about 7s. per day on the one pair of horses, and we reckoned that an additional digger would save its own cost in little more than a fortnight. Some farmers have a prejudice against putting aside implements until they are quite worn out, quite regardless of the patent fact that by doing so and using obsolete tools they are penny wise and pound foolish.

We know a man who never stayed many years on one holding, but who removed to pastures new at almost regular



periods. He maintained that the expense of moving was fully compensated by having a sale and relieving himself of a quantity of old, out of date machinery and useless lumber. But it should be quite possible to attain that without leaving the farm, and at this time of year a looking over of the implements, with a resulting weeding out of much useless lumber for sale to the nearest broker, would both improve the appearance and add to the convenience of the implement shed on many farms. How often we see costly machinery left out in the fields long after it has been in use. This is especially noticeable in the case of harrows and horse-hoes. Foremen forget what an increase of wear arises from such unnecessary exposure.

If the shed were cleared of unnecessary rubbish there should be ample room for all articles not in actual use. The winter quarter is an expensive and anxious time for the cattle feeder; but the greater plenty of roots and fodder will make his anxieties during the approaching winter much less acute than they have been in recent years. There is one trouble still pressing, and that is the high price of cakes. With so much damaged corn, and plenty of straw to cut up, it would be a wise course to use meals freely as cake substitutes. For animals over twelve months, and for cows and heifers in calf, meal with roots and chaffed straw may largely reduce the cake bill. There is more damaged grain on the market already than there is demand for, and it would be suicidal to buy dear cake and flood the markets with corn which might be used at home in its place.

A feature of winter is the feeding of bacon pigs, and it is at present most profitable; but there are signs of a turn of the tide. Small pigs are much more plentiful, and almost reasonable in price. They are decidedly worth buying unless pork is much cheaper in the spring, for pigmeal will be plentiful, and offal Potatoes are always with us. They can be bought for 20s. per ton, and we would rather speculate in pigs and them than in the new Northern Star Potato at 10s. per lb. The latter smacks too much of advertisement to suit our taste.

### Work on the Home Farm.

Delivery of Potatoes has been one of the chief occupations of the week; all the spare hands have been occupied working the machine riddle, and twelve to fourteen tons per day has been the result. The Potatoes are an excellent sample, and it is some time since there was so little disease, but the crop is decidedly light.

The horses not occupied in carting Potatoes away are ploughing fallows and carting Turnips for the beasts which are now up from grass. There will be Turnips and to spare for everything. Swedes have grown enormously during the past month, and we should like to have some stored, but they appear too full of growth as yet. There is another reason for delay in the fact that we are shorthanded, owing to the Martinmas holidays. Wages are supposed to be a little easier, but men are as difficult as ever to obtain, and even more independent and dictatorial. Many of them will not rehire themselves immediately, but wait awhile, so as to extend their holiday. Meanwhile the labourers have to feed and work the horses, and other work has to be left for more convenient seasons. Thus the hedging work, which requires attention, must wait.

We shall put some basic slag on a field of low-lying peaty land very soon. We shall have to use a drill, for even when well damped, sowing it is objectionable work, and men will scarcely undertake it.

Steam cultivators are at a premium, and we may not get our ley cultivated before Christmas. This is serious, for it is time the work were done, but it is unavoidable. New tackle cannot be obtained, as manufacturers are full of Government and other work, so we must wait patiently. The soil is somewhat heavy, and requires all the frost action it can have. We might dig it over with chilled ploughs, three horses in each, but it is very heavy work, and the horses have had a hard time since harvest.

## Webb and Sons' Root Competition.

The awards in the above competition for the valuable prizes offered by Webb and Sons, the King's seedsmen, Wordsley, Stourbridge, for root crops grown from their seed and with the aid of their special manure have just been issued. The judges were: Mr. F. Horne, Salters Hall, Bobbington, Stourbridge; Mr. Morgan Jones, Delbury, Craven Arms; Mr. H. Wilson,

Gatacre, Bridgnorth; and the following is a copy of their awards:—

DISTRICT 1.—Five acres of Webb's Swede, open to the counties of Salop, Stafford, Montgomery, Warwick, and Leicester. First prize, £15 15s., Mr. J. B. Ball, Knightley House, Eccleshall, Staffs, 50 tons, 4cwt 1qr 4lb per acre; second prize, £10 10s, Mr. Alfred Hocknell, Norton House, Stone, Staffs, 47 tons 2cwt 3qr 12lb per acre; third prize, £5 5s, Messrs. Francis Bros., Leighton Farm, Welshpool, 44 tons 5cwt 2qr 24lb per acre.

Three acres of Webb's Mangold. Prize, £5 5s., Mr. Richard Preece, Cressage House, Shrewsbury, 60 tons 1cwt 1qr 20lb.

DISTRICT 2.—Five acres of Webb's Swede, open to the counties of Hereford, Monmouth, Brecon, Glamorgan, Carmarthen, and Pembroke. First prize, £15 15s., Mr. J. Thomas, Tile House, Boverton, Cardiff, 42 tons 17cwt 0qr 16lb per acre; second prize, £5 5s., Mr. Rees Thomas, Boverton Place, Boverton, Cardiff, 39 tons 5cwt 2qr 24lb per acre.

Three acres of Webb's Mangold. Prize, £5 5s., Mr. Philip Price, Howick Farm, Chepstow, 93 tons 14cwt 1qr 4lb per acre.

DISTRICT 3.—Five acres of Webb's Swede, open to the counties of Oxon, Berks, Bucks, Wilts, Hants, Surrey, Worcester, and Gloucester. First prize, £15 15s., Mr. W. M. Harvey, Allington Manor, Bishopstoke, Hants, 31 tons 2cwt 3qr 12lb per acre; second prize, £5 5s., Mr. Edward Parsons, Wollaston Farm, Stourbridge, 30 tons per acre.

Three acres of Webb's Mangold, open to the counties of Oxon, Berks, Bucks, Wilts, Hants, Surrey, and Worcester. Prize, £5 5s., the Most Noble the Marquis of Downshire, Easthampstead Park Farm, Wokingham, 65 tons 11cwt 1qr 20lb per acre.

DISTRICT 4.—Three acres of Webb's Mangold, open to county of Gloucester. Prize, £5 5s., Mr. Thomas R. Chew, The Callow, Dymock, 72 tons 5cwt 2qr 24lb per acre.

DISTRICT 5.—Five acres of Webb's Swede, open to the county of York. First prize, £10 10s., Mr. W. Scorer, Skelton, Ripon, 42 tons 11cwt 1qr 20lb per acre; second prize, £5 5s., Sir I. Lowthian Bell, Bart., East Rounton, Northallerton, 38 tons 15cwt 2qr 24lb per acre.

Three acres of Webb's Mangold. Prize, £5 5s., Mr. Fred Thompson, Marton Farm, Marton, R.S.O., 46 tons 4cwt 1qr 4lb per acre.

DISTRICT 6.—Five acres of Webb's Swede, open to the counties of Norfolk, Suffolk, and Cambridge. Prize, £10 10s., Mr. Thomas Kidner, Halvergate Hall, Norwich, 30 tons 1cwt 2qr 20lb per acre.

Five acres of Webb's Mangold. Prize, £5 5s., S. Nightingale, Esq., Scraby Hall, Great Yarmouth, 38 tons 12cwt 3qr 12lb per acre.

DISTRICT 7.—Five acres of Webb's Swede, open to the counties of Bedford, Cornwall, Cumberland, Cheshire, Derby, Devon, Dorset, Durham, Essex, Herts, Huntingdon, Kent, Lancaster, Lincoln, Middlesex, Northumberland, Notts, Northampton, Rutland, Somerset, Westmoreland, Cardigan, Carnarvon, Denbigh, Flint, Merioneth, and Radnor. First prize, £15 15s., Mr. William Morris, Crugan, Pwllheli, 51 tons per acre; second prize, £5 5s., Mr. J. Griffith, Bryn, Carnarvon, 45 tons per acre.

DISTRICT 8.—Five acres of Webb's Swede, open to the counties of Roxburgh, Haddington, Berwick, Edinburgh, and Linlithgow. Prize, £10 10s., Mr. John Meikle, Groughfoot, Linlithgow, 32 tons 14cwt 1qr 4lb per acre.

DISTRICT 9.—Five acres of Webb's Swede, open to the county of Perth. First prize, £10 10s., Mr. Jas McGregor, East Pilmore, Longforgan, 33 tons 14cwt 1qr 4lb per acre; second prize, £5 5s., Mr. Geo. R. Sharp, Bardrill, Blackford, Perth, 32 tons 10cwt 1qr 20lb per acre.

DISTRICT 10.—Five acres of Webb's Swede, open to the counties of Forfar, Fife, and Kinross. Prize, £10 10s., Mr. Thomas Walker, Easter Balgarvie, Cupar, Fife, 34 tons 10cwt per acre.

DISTRICT 11.—Five acres of Webb's Swede, open to the counties of Aberdeen, Banff, Kincardine, Inverness, and Elgin. Prize, £10 10s., Mr. Jas. Scott, Earnhill, Forres, 33 tons 15cwt 2qr 20lb per acre.

DISTRICT 12.—Five acres of Webb's Swede, open to the counties of Dumfries, Kirkcudbright, and Wigtown. Prize, £10 10s., equal, Mr. James Guthrie, Corwar, Outon, Wigtownshire, Messrs. W. and G. Lindsay, West Roucan, Dumfries, 32 tons 11cwt 1qr 20lb per acre.

DISTRICT 13.—Five acres of Webb's Swede, open to the counties of Stirling, Dumbarton, and Clackmannan. Prize, £5 5s, Mr. Alex. Lucas, Craigton Farm, Causewayhead, Stirling, 30 tons 2cwt 3qr 12lb per acre.

DISTRICT 14.—Five acres of Webb's Swede, open to the county of Ayr. Prize, £10 10s., Mr. Jas. Bone, Robstone, Girvan, 48 tons 8cwt 2qr 8lb per acre.

DISTRICT 15.—Five acres of Webb's Swedes, open to the county of Peebles. Prize, £5 5s., Mr. Chas. A. Gracie, Easter Happlew, Stobo, 25 tons 11cwt 1qr 20lb per acre.

DISTRICT 16.—Five acres of Webb's Yellow Turnips, open to the county of Lanark. Prize, £5 5s., Mr. Geo. Findlater, Jerviswood Mains, Lanark, 40 tons 18cwt 2qr 8lb per acre.

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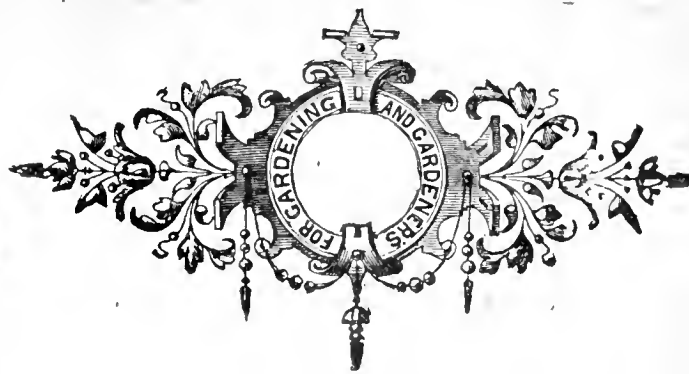
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## Journal of Horticulture.

THURSDAY, DECEMBER 4 1902.

### Fleeting Honours.



NOVELTY is a great factor in the horticulture of these days. If the supply of new varieties of flowers, fruits, and vegetables were stopped, in all probability the several committees of the Royal Horticultural Society would cease to exist, for the simple reason that there would be nothing for them to do. Without novelties the horticultural press would be in danger of running short of matter and material for illustration, while the gardening world at large would have nothing to go in ecstasies over, nothing to wrangle about, and the whole thing would fall flat and uneventful.

Doubtless the main object of those who are responsible for the introduction of new varieties of plants is to make money. This does not necessarily imply greed, for it is all a part of the great work of advancement; and it is questionable whether many who have been the means of introducing beautiful and useful plants to the world have been recompensed to the extent they deserve. At the same time there is an acute business desire to get novelties Hall-marked by First Class Certificates and Awards of Merit, and the giving or withholding of these honours makes all the difference to the subsequent value of the novelties in question. If a man has got what he considers to be a good and new thing, he despatches it by natural instinct to a meeting of the R.H.S., and his object is not so much fame for himself as money for his pocket. A committee sits in judgment over the novelty, and on their decision its fate depends. If an award is granted, that novelty is possessed at once of certain value; it is talked about, written about, illustrated, and put into commerce; in short, it becomes famous in some degree; but if the committee

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pass it over the owner can take it home again and enjoy its beauty or its usefulness alone, for the public will have none of it. Novelty is not its name then, and it recedes into the shades of insignificance because it has been found wanting by the authority that is not infallible. Considering the value, then, of a First Class Certificate or an Award of Merit, it is not surprising that there should be a mutual desire, particularly amongst tradesmen, to get for their novelties the hall-mark of value.

But how fleeting are these honours in many cases! How short-lived the fame of the subjects that win them! What becomes of all the new varieties of plants, fruits, and flowers that receive awards from time to time? The question is an interesting one, and the answer not easy to give.

When one thinks of the subjects that have been placed before the Royal Horticultural Society's committees say, during the past ten years, and have passed through the doors of the Drill Hall with First Class Certificate or Award of Merit tacked to their names, why the number must be legion, and if all, with their newly-acquired honours, went forth to conquer, what a wealth of material there would be in the world! As it is, there is a wealth, everyone will admit that, but the percentage of novelties that live and last and increase is small compared to those that make a flash in the pan, and go under, to be heard of no more. It is all part of the play, however. If we were content to keep and grow only the things we have, there would be no room for novelties, and what I want to dwell on most is the short career, yea! and ignoble end of many varieties of plants that bear the hall-mark of the Royal Horticultural Society, or some other special society.

Take Chrysanthemums, for instance, which just now are occupying chief attention. Last year a number of novelties were introduced. The best of them will be generally seen on show-boards this season, next year they will be represented in lesser numbers, and a few years hence their places will be entirely taken by the novelties introduced in the interval. This is just the way things go; but one pauses sometimes to wonder what has become of all the Chrysanthemums of the past. The fact is, people want novelties, and after the novelty stage is over the varieties die out, wear out, or are lost in the crowd. At any rate, a new Chrysanthemum is not much for a grower to pin his faith to. The raiser had better make the most of it while it is new, for it quickly grows old and is packed away with the hundreds of varieties whose glory has departed. After all, it is a hollow success that of new Chrysanthemums, and those who welcome their advent with applause also see them drop out of the ranks without a regret.

Like most other people who have a fancy for Dahlias, I have been much interested in the large number of new varieties that have been introduced this season, some of them quite distinct and others differing but little from forms already in cultivation. They have made their entry, these Dahlia novelties of 1902, they have been described, illustrated, and their merits discussed, and all that now remains is for the Dahlia-fancying public to buy them. The honours, however, that have fallen upon them are only fleeting. For a few seasons they may figure in collections and on show-boards, and then they will fall to the level of the commonplace or be lost altogether. Like stars in the theatrical world, our new Dahlias and Chrysanthemums have their day, either long or short as the case may be, and while it is on other novelties are being raised, which in due course oust the one-time favourites from their place. It will, perhaps, be said that novelties wear out, and after being in cultivation for a time they lose their characteristics. Such being the case, it would seem essential that hybridists and raisers should relax none of their efforts; but if this wearing-out theory be correct, then it is obvious that the continued high breeding, if I may so call it, is carried on at the expense of the constitution of the plant. But people will have novelty. They will rave about a new Dahlia and grow it in preference to such a gem as Glare of the Garden, for instance, though it may not be half so useful; but then, you see, one is old and the other is new.

The introduction of new Melons is not such a common occurrence as it used to be; and for the reason, I think, that growers have little faith in them. Recently the Royal Horticultural Society's Fruit Committee granted an award to one, but how long will it last, I wonder. Where are all the Melons certificated from time to time by the Royal Horticultural Society? A few remain in general cultivation, but the majority have gone under long enough since. Many a grower has gone out of his way to secure a highly-puffed novelty, only to be disappointed, and he has been glad enough to fall back on the old Hero of Lockinge, or some other standard and well-tried sort. New Melons are wonderfully deceptive, and the Award of Merit or First Class Certificate is no guarantee of their lasting powers and quality in the future. I think those who are responsible for the crosses are now alive to this, as there is not so much eagerness to put every seedling that comes into commerce, as there was a few years ago.

I have only just touched on the fringe of a question that affects almost every family of plants, but I have said enough to show that though the honours meted out to novelties are of a fleeting character, yet the demand for new things grows, and the supply must be equal to it if the interest in horticultural matters is to be maintained.—G. H. H.

## STRAWBERRIES IN POTS.

All plants for early forcing should be in frames. They cannot have too much air, therefore tilt the lights in mild wet weather, and remove them altogether when it is fair and warm, keeping close only when frost prevails. Do not place them in Peach houses or other structures where they will be exposed to drying currents of air. Evaporation in such is constant and excessive, wasting the energy of the plants, and not unfrequently so dries the soil at the sides of the pots, they not being plunged, as to destroy the active feeders. Drought is the greatest bane of the Strawberries; those in frames must have water as required, always keeping the soil moderately moist. Plants for midseason and late forcing are just as well stood on ashes and plunged over the rims in that material, or cocoa refuse, the situation being sheltered, but not shaded.

**EARLY FORCING.**—Plants of such varieties as La Grosse Suerée, Royal Sovereign, and Vicomtesse Hericart de Thury, must be held in readiness for starting at the beginning of December, where early fruit is required. There is no question that a Strawberry house is more suitable, especially when fitted with stage shelves, so that the plants will be about 1ft from the glass, that is, the tops of the pots, as the wants of the plants can be furnished according to their advantageous requirements, which is not always the case when the plants have to be forced in vineries or Peach houses; but they are grown successfully in such structures, and the fruits are always appreciated, the chief point being not to bring them on too rapidly. An early Peach house takes a good number, and is particularly suited to such varieties as Noble, President, and Auguste Nicaise, as they do not bear as much heat in the early stages of forcing as those before named.

In the case of plants having well developed crowns and abundant roots, there is nothing to fear as regards a satisfactory issue; but plants not in that condition should be started later, or be brought on very gradually. That, however, is not applicable to places where the ripe fruit must be had at a given time. Where this is the case, and the plants are in a backward condition, their starting satisfactorily may be enhanced by making up a bed of leaves 2ft to 2½ft in height, placing the plants in a frame upon it, bringing up the plants so as to be just clear of the glass, packing the spaces between the pots with damp leaves. The bottom heat at the base of the pots must not exceed 65deg to 70deg, the top being kept cool, air being freely admitted, 50deg of top heat not being exceeded, and when mild withdraw the lights.

Activity at the roots of the plants by means of the warmth is promoted, and the crowns will plump, the trusses being advanced considerably in embryo.

After three weeks or a month of this treatment the pots may be withdrawn, raising them gradually so as to insure the plants bearing the temperature of the Strawberry house or other structure without check. If taken direct from the bed the roots at the sides of the pots would in all probability get chilled; therefore they must not be taken from the warm bed to the shelves. Very careful treatment is required to secure a satisfactory return from very early forced plants.—G. A.

**Odontoglossum grande.**

The illustration represents a very compact specimen of *Odontoglossum grande* with nine blooms of more than ordinary size and rich markings, upwards of 6in across. The owner—Mr. G. H. Thompson, Grove House, Walsall, is an ardent amateur Orchid grower, and has exhibited the specimen in question on more than one occasion at the Birmingham Gardeners' Mutual Improvement Association's meetings, and was awarded a certificate of merit. In the culture of his collection of Orchids, he commences with small young plants, and finds more pleasure and interest in so doing than in procuring established plants. The collection, which consists of cool or intermediate species chiefly, are grown in two comparatively small structures—span-roofed—and efficiently heated from the large boiler attached to the adjacent electro-plate works. The enthusiastic and energetic owner devotes what time he can spare from his onerous business duties in attending to the Orchids. Mr. Thompson is a believer in leaf mould, especially for the culture of certain Orchids when they require a fillip in the young state; also in a judicious admixture of leaf mould, peat, and sphagnum for general purposes. The collection favourably impressed me, an impression shared by more than one expert in Orchid culture, and Mr. Thompson's ability and success is accentuated by the fact that the plants are existing under otherwise unfavourable conditions when it is considered that the site is closely surrounded by at least half-a-dozen factory chimneys belonging to other firms.

At the period of the writer's visit but few plants were in flower. It should be mentioned that several specimens of *Dendrobium Wardianum* were noted for their vigorous and well ripened pseudo-bulbs; likewise luxurious and fine plants of *Cymbidium Lowianum* in particular—a special favourite with the owner—and the photograph of a medium-sized plant of which bearing five or six long racemes of well-developed flowers, lies upon my desk as if courting re-inspection of its charming *contourage*. In concluding these remarks, mention may be briefly made of the remaining plants which are chiefly under the management of Mr. Thompson's son during his spare time from the works, and who is also an expert photographer. There were noted thriving batches of such as *Begonias*, *Cyclamens*, *Primulas*, and subjects too numerous to mention. Orchids and greenhouse plants, however, do not altogether enjoy a monopoly at Grove House if the well furnished and cropped vegetable and fruit gardens are taken into consideration—a feature being the luxuriant beds of finely curled Parsley, self-sown amongst the Gooseberry bushes, thus evidencing the capability of the natural soil to produce such an indispensable culinary commodity.—W. G.

**Cypripedium insigne.**

Perhaps these few notes on a well known but most useful Orchid, the Lady's Slipper, may prove of benefit to some of your readers, as I am aware that this variety does not always flower in a satisfactory manner. When I took charge of the glass department in my present place there were, among other plants, some two dozen plants of *C. insigne* in 8in pots, which, judging from appearances, had not been repotted for five or six years; notwithstanding this there was an abundance of good blooms. In the spring of the present year I decided to divide and repot them, using a compost of two parts peat, one of fibrous loam, and one of leaf soil from Oak leaves, sphagnum moss and coarse silver sand. Six and seven-inch pots were used, which were half

filled with crocks and the Fern rhizomes from the peat. A layer of sphagnum moss was laid over the crocks, the plants were then placed in the pots, and the compost added, being made moderately firm with the hands.

After potting they were placed in their former position, the north side of an intermediate house, and have been given plenty of ventilation ever since by the top and side ventilators. No water was given after the first watering in till the plants had rooted well into the new compost, but overhead sprayings were given morning and afternoon.

The two dozen old plants were split up into six dozen, most of which are now in flower, and have had a total of 250 good sized blooms, half of which have already been cut for house decoration. I am sending a few of the blooms to you by post, and hope they will prove acceptable. A FOREMAN.

[The good-sized blooms were much admired, and betokened correct treatment.]

**The Week's Cultural Notes.**

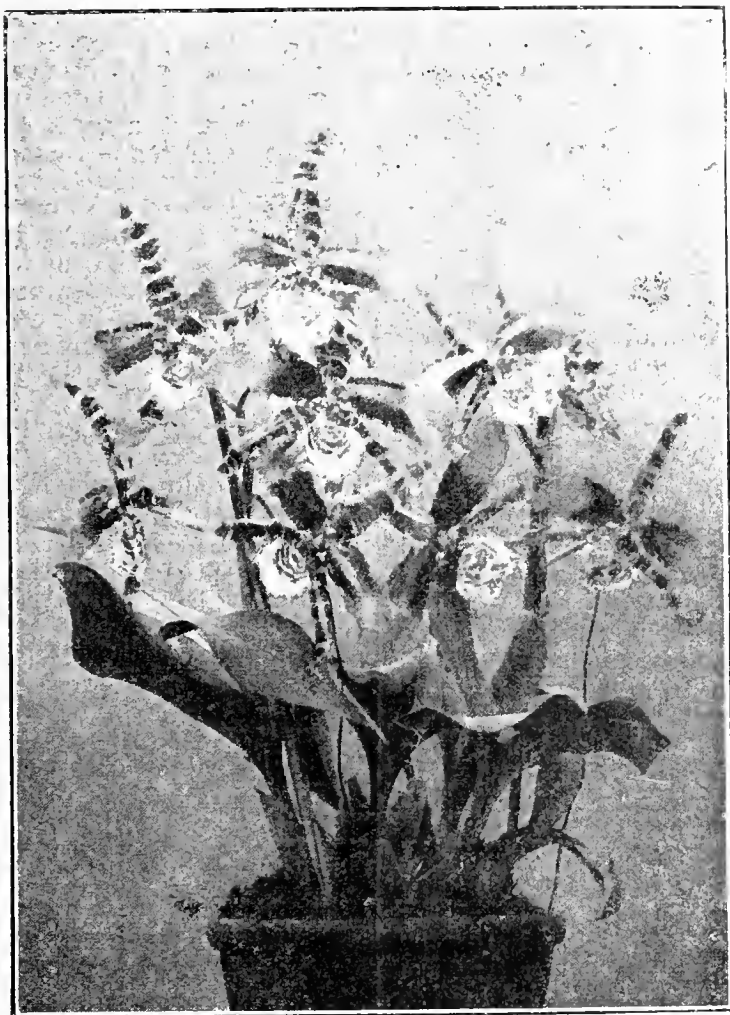
The beautiful *Odontoglossum grande* is now in full flower, and making a fine show. Very often the spikes are immensely large in comparison with the size of the bulbs, and consequently take away a good deal of the nourishment that should go to swell up the latter. Now, as the pseudo-bulb is finishing at the same time the flowers are developing, it stands to reason that the longer the plant has to maintain those lovely flowers the less

nourishment there will be left for the bulb, and the weaker in consequence the young growths will be in spring.

It is better, then, to remove the spikes, after say a fortnight's flowering, than to keep them on longer. They will still last a good time in water, and the plants will be benefited by their removal. I have mentioned *O. grande* as an instance, but there are, of course, many others to which the same remarks will apply. The grand many-flowered spikes of *Oncidium tigrinum* that fill the house with fragrance now, the showy *On. varicosum*, and many others may be noted. It seems a shame to cut them, but one has to look forward to another season as well as this.

The present is a bad time for the *Masdevallias*, these showy and beautiful little Orchids sadly missing the light that is so bountifully supplied them in their habitats. Keep them on the dry side and as close to the glass as possible. Remember, too, that a thorough cleaning, now that they are comparatively at rest, will lessen the quantity of thrips and other insects that prey upon them when in flower in spring. Fumigate the house lightly on two successive evenings before commencing to sponge the plants, and probably fewer of the blossoms will be disfigured by the white footpaths made by thrips.

Some varieties of *Cœlogyne cristata* keep much more plump in winter than others, the round bulbed varieties as a rule not shrivelling as much as the long bulbed ones. I have never found any great harm accrue to the plants from shrivelling, but it is better to keep them from it if possible. Give water occasionally on bright days, but pour it on carefully, and not about the brown dusky looking flower spikes, for although these are pointed and hard looking, and apparently well able to take care of themselves, there is always a danger of damping at this dull time.—H. R. R.

**Odontoglossum grande.****A Topsy-turvey Year.**

Despite alarmist paragraphs in the newspapers reporting hard weather, the following facts are still coming in. The station-master of Nassington, Lincs. (Mr. Randall), had a Victoria Plum tree bearing fifty fruits on November 19. St. Joseph Strawberries were gathered near Stamford, also on November 19. At Towcester, Northampton, a correspondent picked and ate a fine dish of green Peas on the 20th inst., also four Peach fruits grown in the open air. In his garden an Apple tree is in full bloom, and several others have bunches of flowers. Bunches of wild flowers and Strawberries were gathered on the 16th ult. at Beaford, North Devon.





### Brussels Sprout, Solidity.

I am posting you a small box of B.S. Solidity, which was sent out last year by an enterprising local firm of seedsmen, Messrs. Alexander and Brown, Perth. I consider it is by far and away the best Sprout I have grown, and send these few to be tested by the Editorial palate, and I have not the least doubt but that you will find them A1. The plants are sturdy, 2½ ft in height, and literally crowded with sprouts. The enclosed were just picked at random.—ALBYN, Bridge of Earn, Perthshire.

### The Horticultural Hall.

Allow me to express my surprise at the plan and elevation selected for the new hall. In an undertaking of national importance the very best design that can be obtained should be secured, and I venture to suggest that an open competition for architects would lead to that result. I offer no criticism upon the drawings referred to, but am convinced that better designs, both for the interior arrangement and the exterior effect, would follow if competitive plans were prepared by expert architects, and might suggest that a prize, or prizes, should be awarded to the successful exhibitors.—JAMES L. WOOD.

### Illegal Showing.

There is more or less rottenness in the whole state of horticultural Denmark—north, south, east, and west, I believe; that is, if seeing is believing, and if Mr. W. R. Raillem, or anybody else, "living down south" doubts it, it merely shows that they have not been privileged to peep behind the scenes. He, at least, has not, apparently, by the very pertinent manner in which he points out to "A Yorkshire Grower" (on page 490) his duty in the matter; but "A Yorkshire Grower" is probably a Yorkshire gardener, and what gardener, may I ask, would dare bring such a hornets' nest about his ears as any stir he made in the matter would inevitably do? I venture to assure Mr. Raillem on behalf of others besides "A Yorkshire Grower," and myself, that there is not the slightest doubt about our duty in the matter; but men who have their livings to get and have to live in "Denmark" find discretion the better part of valour. This matter has cropped up before in the *Journal of Horticulture*, as it has cropped up now, and will crop up again, but, *cui bono*? The most a gardener can do who knows all about it (and is there one who has been exhibiting for thirty years in the capacity of a gentleman's gardener, or the gardener's assistant, who does not know?)—the most he can do prudently is to do as "A Yorkshire Grower" has done, viz., keep well in the background, and cautiously stir up the nest of malignant practices with a long pen, covering his head the meanwhile under the bushel of a *nom de plume*. This gives an honest exhibitor some little relief for his outraged feelings in the buzz that arises. More he cannot expect, nor more will he get until the executive of societies takes more stringent measures to protect him, and stop winking at such practices themselves. This advisedly, for when a journeyman in "Stonewallshire" most of the Asparagus shown in the collections of vegetables was grown by one great market grower, who indirectly supplied it, not openly, of course, nor yet so secretly but what the secretary of the "Royal Stonewallshire Society" knew; unless, indeed, he was one of "the innocents abroad," and I don't think he was, neither is.—QUIZ.

I congratulate "Yorkshire Grower" on his pluck in bringing this important subject to the front. It is sad to think educated and polished men in the gardening profession stoop to such degradation. I call it by no less an ugly name than thieving; depriving an honest exhibitor of his rights. I am aware that I am making a serious accusation against a large body of men, whom, for my part, I should like to be able to respect. Silence only encourages them, and the only way to touch some of them is to prick their conscience through the medium of the press. At local shows this roguery is performed to an alarming extent, and unless the committees are more keen in investigating cases brought before them, and having their schedules drawn up so that the members have power to inspect any garden after entries are in and previous to the show, I am afraid a great many small exhibitions will soon be a thing of the past. I endorse what

"Yorkshire Grower" says about men collecting fruits and vegetables here, there, and everywhere, and I believe the remedy is for the staunch or honest exhibitors and committeemen to keep the subject to the front at their meetings; and to expose all proved cases as much as possible, and permanently disqualify any person from exhibiting. Now, a word to those who assist in this dishonest practice, either by giving, lending, or selling expressly for the purpose, and then sharing the prize money or not, are, in my opinion, as bad as the person who exhibits them.—G. G. H.

I am afraid the evil to which "Yorkshire Grower" calls attention is more difficult to cure than "W. R. Raillem" appears to think. I have occasionally known instances where the committee of a society were energetic enough to take action on information received and withhold prizes which were fraudulently won, but such a thing involves a great deal of trouble, especially when the exhibitor hails from a distance; and many people, it is to be feared, shrink from the task. Again, I have known a lady who, on reading that her gardener won a prize for a collection of fruit in which Figs were included, wrote to the secretary informing him that she had no Figs in her garden, with the result that the said gardener lost his prize, and as he was insolent about the matter, he also lost his situation. On the other hand, I have myself been an unwilling contributor to fraud. Most expert cultivators of Grapes can recognise their own fruit wherever they may see it, and I have on more than one occasion seen fruit at an exhibition which I had previously sold to a tradesman. But my evidence in such a case would not be sufficient to convict. Once I had a very clear case and made up my mind I was sure of revenge. A neighbour in the trade who was a regular customer for flowers, Tomatoes, &c., wanted two bunches of Grapes. I remembered that a show was to be held the next day some distance away, and I was to be a judge. I therefore cut the Grapes close to the bunches without leaving any stem, thinking that if evil intentions were aimed at I should frustrate them. But in this I was completely baffled. When judging time came I found these very Grapes in a collection of fruit arranged neatly in a basket, and I had no alternative but assist in awarding them the first prize. The next thing was to see the secretary and acquaint him with the facts, telling him that I was willing to take all responsibility if the committee would do their part. But my offer was not accepted, and the fraudulent winner received his prize.

Two or three exhibitors at the Bristol Show were in the habit of carrying away prizes for produce year after year which had not been grown by them. The show committee, which is composed principally of practical gardeners, inserted a clause in the schedule reserving to themselves the right to refuse entries from any person without giving reason for such refusal, and in this way they have shut out suspected fraudulent exhibitors. I know of one rather amusing case relating to illegal showing. A had entered at the Crystal Palace to show Asters. B had also entered in the same class. A had his flowers arranged at home when B, who was a near neighbour, called to see him. Says B: "I am short of that particular colour, you might give me a bloom or two." A in a weak moment yielded; with the result that he was placed second, and B was first. A told me of the incident, expecting sympathy, but I said, "Served you right."—WM. TAYLOR.

### A Mild Season.

I here send you a few Peas. I have been gathering every week up to November 17, and I have sent you a piece of the stem, or haulm, and a few Runner Beans, with a piece or two of the foliage. I also enclose a few flowers gathered from outdoors in the open on November 17 and 18. Dahlias I have had in abundance—that is, flowers. We have had a change here now, however, which will cut everything off. I have sent you a few Strawberries; they are green, if the weather had but kept open and fine I should have soon had them ripe. I have only finished putting my bedding plants up to-day, November 18.—JOHNSON MAYHEW, The Gardens, Woodbank, Stockport, Lanes.

Enclosed please find two spikes of Raspberries, cut this morning, November 19.—R. BURRELL, Westley Hall, Bury St. Edmunds, Suffolk.

### Gloriosa superba.

I am sending you a few flowers of *Gloriosa superba* as grown here, thinking they may prove interesting at this late date. For some few seasons we have pursued a practice of starting a quantity of this plant late, and we have been rewarded with a truly glorious display at a time when they are very useful, i.e., end of September till nearly Christmas. I think it of note

as we usually see it at its best during the summer, and, I am bound to add, sometimes at its worst, owing to the prevalence of thrips. With this treatment it grows as strongly and as freely flowers, while I think the colour, if anything, is enhanced. It is greatly appreciated here; we frequently use it for table decoration, the flowers lasting a long time when cut and placed in water. This is not an attempt to alienate your love for the Autumn Queen or to usurp any of its space in your pages, but perhaps, like us, you can find room for both.—E. J. P. [The flowers were exceptionally fine.—Ed.]

### N.C.S. Judges.

In fairness to the management of this society, I, as one of the independent judges at the late November Show, wish to inform the public, and "F. W." in particular, how we were ciceroned while in the building preparatory to commencing our duties on the morning of the show. A week before the date I received a letter asking me upon entering the building to go direct to a room in the gallery and wait there until I was required. I entered the building at 10.45, carrying out my instructions to the letter, and I can answer for eight of the other judges doing the same thing; perhaps there were more, one or two are not personally known to me, therefore I cannot be quite accurate beyond the number given. Whether or not "F. W." had other reasons to complain of, it should certainly be widely known how the management acted in this detail. I suggested previous to the day that we poor mortals should be blindfolded and escorted into the building and past those exhibits which we were to adjudicate upon later in the day!—EDWIN MOLYNEUX.

### The Scarcity of Journeyman Gardeners.

The question that should be at present engaging the serious attention of gentlemen, nurserymen, and head gardeners is the scarcity of young journeymen. Of practical qualified head gardeners there are abundance, but I maintain that the supply for young men as practical and efficient gardeners is very much exceeded by the demand. As we all know, an advertisement in the paper will bring dozens of replies, but sift them out, and how many young men will you find to take the under gardener's position who have any knowledge at all of horticultural work? A gardener of my acquaintance recently advertised for a journeyman. It is true the salary was not munificent, but the following are a good sample of the replies he received, and will serve to bear out my remarks. One letter went on to explain that the applicant was a carpenter and painter, but he had an allotment piece under cultivation, and he had been so successful with it that he was sure he would be a first-rate gardener, and would not object to fill in time at any odd jobs at his trade. Another had been working as a groom, but having noticed that coachmen and gardeners were advertised under the same heading, was confident that he could manage the work.

Of course, my observations do not apply to the kitchen gardener, but to the all-round gardener, who has to spend a lifetime at his work, and then can ever be learning and finding out something new in the cultivation of plants, fruits, and vegetables.

The pertinent question, however, is: Why is there such a scarcity of young gardeners? One reason is that the amount paid them is not as a rule sufficient, and when the young man has to face life on his own initiative he finds that other trades and professions offer him special inducements, but in the gardening world there are none. He wants to become a practical gardener, but what are his chances? Going right away from home, he is very likely installed in a bothy; he does not live, but manages to exist somehow, with absolutely no comfort whatever. If there is no bothy, then there are lodgings, which swallows up three-fourths of his salary. No wonder he hesitates; and so it is that, although the man has a natural liking for one of the most beautiful and interesting professions, the inducements offered other ways by far out-balance those offered by gardeners.

On the other hand, supposing a man decides to go in for horticulture. He starts at a low salary, living a life of discomfort, but taking an active interest in his work, and studying in spare time. Having, after a number of years' hard work, obtained a thorough knowledge of his profession, he desires to get a situation as head gardener. Are there any obstacles in his path? Merely the fact that dozens of able and experienced men are working as under-hands in a nursery, waiting for their long-coming chance. When it does come, is the salary as a rule good, and likely to repay the man for his years of hard study and labour? Emphatically I say no! More than likely it is just above the amount paid to the unskilled labourer.

There is no doubt whatever that the welfare and training of the coming generation of gardeners demands expert consideration, and something should be done to bring forward a combined movement on the part of nurserymen and gardeners to consider what in a few years threatens to become a serious problem.

Although horticulture has flourished in this country of recent years to a surprising degree, the credit is chiefly due to the large nurserymen and growers. I do not mean for one moment to cast any reflection upon gentlemen's gardeners, because the majority are skilled and capable men. My point is, that the gentlemen do not encourage their gardeners to test their skill; on the contrary, they prefer quantity to quality. On the other hand, the nurseryman is always striving to outdo a competitor, and therein lies the secret of his success. I am afraid the coming generation of gardeners will not enjoy the palmy days of their predecessors. The good old county gentry are fast dying out, and the self-made commercial man is taking their place. He has no eye for beauty or love for horticulture. Imbued with the modern theory money makes money, he wants to see the garden paying its expenses; if it does not, then it's bad for the poor head gardener, and worse for his struggling, half-paid journeyman. My view of the situation may seem gloomy, but it has been upheld by a number of horticultural experts whom I have consulted. Perhaps some of your readers will like to express an opinion on the subject.—E. E. R.

### CHERRY HOUSE.

Attend to the pruning of the trees; this is a light affair where the trees have been regularly stopped during growth and are full grown. Shoots not wanted for extension or filling vacant space should be cut back to about an inch from the base of the current year's growth, and the worn-out spurs, as well as the dead, may be removed. The terminal shoots, in the case of young trees not full sized, must not be shortened unless the extremity of the trellis is reached, and the central shoots of young trees will require to be cut back as may be necessary to originate shoots for filling up the space regularly, care being always taken to prune to a wood-bud. Fan-training is the most eligible system, particularly suited to the Cherry, as it admits of replacing any branch that may fall a prey to gumming. The house should have a thorough cleaning, the trees being dressed with an insecticide after washing with softsoapy water. A composition formed of a solution of softsoap, 4oz to half a gallon of water, one quart of tobacco juice diluted with a similar quantity of hot water, with slaked lime and flowers of sulphur in equal parts sufficient to form a thin paint, is an excellent dressing for Cherry trees, applying with a brush, being careful not to injure the buds. The roof lights need not be put on until the time arrives for starting the trees, which may be with the new year to have Cherries ripe in April and May.

### FIELD AND GARDEN-GROWN TURNIPS.

It is a fact commonly acknowledged that Turnips grown quickly in the open field are invariably more tender in flesh and of better flavour than those produced under conditions afforded in the garden. This has especial reference to the late summer and autumn. In the field the farmer treats Turnips strictly as a catch crop; it may fill in a space of time, or provide an auxiliary crop for the winter. In the garden when the weather is droughty, and the Turnip flea is ever ready to devour the tiny seedling as it emerges from the soil, there is often a deal of anxiety raised as to future provision. The garden, always stocked with vegetables of the Brassica species, affords a cover for the troublesome fly; but in the field this is not the case generally, though in some seasons the farmer need to anticipate these troubles.

Apart from these seed-bed anxieties, there is in autumn a much better textured root obtained from the open field, because their growth advance under so much better conditions: air, light, and freedom from obstruction, such as fruit trees afford, give them an unfettered opportunity. The method of tillage, too, differs from the garden; and, treated as a catch crop, there is an absolute change of soil, which to almost everything we grow is so important. This season, with its frequent showers, Turnips have done much better than usual; and the winter prospects, instead of being a dread, are a source of hope. A dearth of Turnips is sure to give rise to friction in the kitchen, and the gardener's life assume a worried tone if this important root vegetable is unavailable for its daily purpose.

Despite the frequent rains and lower range of summer temperatures, there has still been times of scarcity in Turnip crops; but the greater consolation comes in having a good store for the winter. When these fail in August seed-beds from the effects of summer drought and war-like attitude of the Turnip flea, there is a very dull hope for recurring months. It is in such times when the field gives a reserve to draw upon that is both welcome and satisfying—satisfying because of their good quality, and welcome because of the abundant store to draw upon. No crop repay open-air treatment more than Turnips, and no ordinary garden afford the same conditions as do the field for a winter's supply.—R. A.



## NOTES

## NOTICES

**The Chrysanthemum Analysis.**

The voting papers for the Chrysanthemum analysis are now in the hands of the leading exhibitors and growers, and Mr. E. Molyneux hopes soon to be able to have this annual contribution to the pages of the Journal completed.

**The Greenhouse at Kew.**

To the list of plants in flower, given on page 495 last week, we have now to add the following:—*Centropogon Lucyanus*, with crimson, corymbose heads; *Jasminum grandiflorum*, *Luculia gratissima*, *Rhodochiton volubile*, *Tibouchina macrantha*, Roman Hyacinths, Paper-white Narcissus, and a few *Hippeastrums*.

**Beckenham Horticulturists.**

On Friday, November 21, Mr. M. E. Mills, The Gardens, Coombe House, Croydon, gave a lengthy discourse on the culture of the Japanese Chrysanthemums (cut blooms) for exhibition. Mr. Wm. Weeks, late secretary Bromley C.S., presiding. The essayist being a very successful cultivator, it was exceedingly gratifying to him to face such a large audience, and if one could judge by the notebooks and pencils in evidence, information of a special nature was expected, and proved to be forthcoming. Mr. Mills minutely detailed his own practice from the cutting, leading his hearers through the various operations, mixing of soils, successional pottings, &c., and gave a long list of up-to-date varieties, with proper times of stopping to secure best results. For dealing with the dreaded rust Mr. Mills strongly recommended Bentley's Mildew Specific, he having found it very effectual. Many questions were put to Mr. Mills, and replied to satisfactorily by him. Mr. W. Taylor, of Forest Hill, also gave his ideas on stopping, and concluded by moving a hearty vote of thanks to Mr. Mills for his excellent essay. Mr. Weeks, in supporting this, made some very pithy remarks on Chrysanthemum culture in general, and his experience of the rust, if one can call it so, for, strange to say, Mr. Weeks has grown cuttings from stocks as badly infected as possible to be, but has never had the disease develop on his plants. Hearty thanks were accorded Mr. Weeks for kindly presiding. The society's certificate of merit was gained by Messrs. Langford and Robertson for exhibits of cut blooms with long stems.—T. C.

**Fruit Growers in Conference.**

This journal has at all times advocated co-operation amongst fruit-growers in order that the fruit-growing industry might become a thoroughly successful one in this country. On another page this week we print a letter from the secretary of the Fruit Growers' Federation, the consideration of which we commend to our readers. Local associations are springing up in the wake of the Federation, and will be attached to it. Last Saturday evening (November 30), at Swanley, in Kent, a meeting was held, and after discussion about twenty growers, including local market gardeners, expressed their desire to join the National Fruit Growers' Federation, and some few paid their subscriptions. The chairman, Mr. A. T. Matthews, secretary to the Federation, briefly thanked those present for their kindly expressions towards himself, and hoped the twenty joining the Federation would soon become 100.

Mr. John Wood presided over the second meeting, which was held after Mr. A. T. Matthews had left, for the consideration of the question as to the advisability of forming a growers' protection committee or association for North-West Kent, or Swanley and district. Mr. Thomas May ultimately moved the following proposition: "That a local branch of the National Fruit Growers, Market Gardeners, and Horticulturists' Federation be formed, to be called 'The West Kent Fruit and Market Gardeners' Association,' the objects being the consideration and protection of local interests; that regular meetings be held; that the officers be representative of all classes of the industry; that each member pay 10s. to the National Federation of Fruit Growers, and that the local branch be affiliated with the Federation." Mr. F. Wood seconded, and the proposition was carried unanimously.

**Appointment.**

Mr. Charles S. Ritchie, late of The Larches, Pembury, Kent, has been appointed head gardener to B. Oakes, Esq., Benellen Towers, Bournemouth, Hants.

**Vine Cross Fertilization.**

A correspondent writes: "I shall also be very much obliged if you could advise me as to the latest practical works on the subject of 'Vine Culture,' more especially with a view to cross-fertilisation." Can any reader assist?

**Devon and Exeter Gardeners.**

A well-written paper on "Hardy and half-hardy annuals for the flower garden," prepared by Mr. J. Mayne, gardener to the Hon. Mark Rolle, of Bicton, was read at a meeting of the Devon and Exeter Gardeners' Association at the Guildhall, Exeter, on November 26. There was a good attendance.

**National Dahlia Society.**

The annual general meeting of the above society will be held, by kind permission of the Horticultural Club, in the Club Room at the Hotel Windsor, Victoria Street, S.W., on Tuesday, December 16, at 3 p.m. Business: Report of committee for 1902, financial statement, election of officers, and other business.—J. F. HUDSON, Hon. Sec.

**East Liverpool Chrysanthemum Show.**

This society has been formed principally for the benefit of a large number of allotment holders, principally workmen employed by the London and North-Western Railway Company. To make the show more attractive outside exhibitors were allowed to compete, and a really smart little exhibition was the result. Mr. J. D. MacGregor, in the presence of a good company, performed the opening ceremony, and made a very encouraging speech. In the greenhouse competition there was much good work to be seen, the winners being Mr. Carnforth, Mr. Glenning, Mrs. Lillie, and Mr. Wolfe. The open classes all went to Mrs. MacGregor, as did the basket class, Messrs. C. C. Hall and Glenning following. With such a good inaugural show the committee may confidently look forward to a great increase next season.—R. P. R.

**Camphill Gardens, Glasgow.**

I think it is pretty generally known that the estate and gardens of this name have been in recent years acquired, as additional "lungs" for the City of Glasgow, by the Corporation. In addition to the expense which this acquisition necessarily involved, the Parks Committee built a magnificent winter garden for the welfare of the citizens. These hothouses are situated almost on the very summit of the hill, which rises a very considerable height above the surroundings, and which, as the name denotes, probably served to make efficient duty as "camp" for ancient Briton, Roman, and Roundhead in turn. It evidently has not escaped the notice of the strategist in civil broils either, for within the range of a stone's throw stands an imposing monument to the last efforts of the fated Mary to regain her crown and kingdom. Langside, or Battlefield, is in its immediate proximity. As would be expected, from a position so commanding, the prospect in every direction is delightful. Away westwards and northwards lies outstretched in the sinuous valley of the Clyde, the great north-western metropolis—indeed, the Second City. The woodlands, rising grounds, and far-away hills of the landward prospects are also not the least interesting and beautiful. Camphill adjoins the Queen's Park of Paxton fame, and taken altogether, a more desirable health and pleasure resort containing so many inspiring features, could not well be attached to any city in Britain. The winter gardens are a first class plant growing establishment. Almost every plant of sterling interest, from the beautiful Orchid to the gorgeous Chrysanthemum, is grown, and grown well. Mr. MacIvor is, without the colour of derogating from the merits of others, one of the ablest all-round gardeners that we know, and Mr. Whitton's selection for this important post was a judicious one. It will not therefore be a matter of astonishment to learn that the consensus of press and public opinion credit Mr. MacIvor this year with the honour of having at present a display of Chrysanthemums on view which for all round merit are unrivalled in Scotland. This says very much for Chrysanthemum culture in Scotland, especially in the locality of Glasgow.—D. C.

**Temple House Gardens, Great Marlow, Bucks.**

The rainfall here during the month of November, 1902, was 2.15in; there were six foggy mornings and three foggy days, and rain fell on fourteen days. The maximum temperature was 55deg on the 11th and the minimum 24deg on the 20th. The maximum for November, 1901, was 55deg on the 11th, and the minimum 17deg on the 16th. The rainfall for November, 1901, was 0.43in. We are situated close to the banks of the river Thames, and 105ft 9in above mean sea level.—G. G.

**Scottish Horticultural Association.**

The usual monthly meeting of this association was held on Tuesday, December 2, in 5, St. Andrew Square, Mr. Comfort, president, in the chair. A number of new members were proposed, and six new life members were elected. Mr. Todd, Edinburgh, gave a lecture on "Bouquets, and How to Make Them." He gave a very lucid and interesting address on the growth and development of bouquet making in recent times, showing to the young gardeners present the modern methods of bouquet making, and urged them to pay more attention to this subject than they usually give. He exhibited a very beautiful bouquet of Safrano Roses, as an example of present-day bouquet making. An interesting discussion took place, and on the motion of Mr. McHattie, a very warm expression of thanks was accorded to Mr. Todd. At the meeting a statement was made as to the financial results of the recent Chrysanthemum show. The report was a very favourable one, showing a credit balance of over £90. It was intimated that next year's Chrysanthemum show would take place on November 19, 20, and 21, 1903. Exhibits on the table were not numerous, but attractive. Mr. Chaplin, gardener, St. Leonards, exhibited a very beautiful plant of Begonia Turnford Hall. This was greatly admired. A plant, beautifully bloomed, of *Salvia splendens*, was exhibited by Mr. Fraser, Kilaroch. Mr. Todd exhibited a very handsome vase of *Souvenir d'une Petite Amie* Chrysanthemum, handsome blooms for decorative purposes. Mr. Todd also exhibited a very beautiful basket of Roses, cut from the open air. They were mostly *Général Jacqueminot*, *Caroline Testout*, and *Captain Hayward*. This exhibit was remarkable as an illustration of the mild late autumn which we have enjoyed. Mr. Kidd exhibited fine trusses of *Linulia gratissima*. A vote of thanks to the president brought the meeting to a close.

**London Dahlia Union.**

At a general meeting of the supporters of the London Dahlia Union held at the Royal Aquarium, Westminster, on November 4, a balance sheet was submitted and approved, and cordial thanks passed to the chairman and secretary. Mr. John Green was unanimously re-elected chairman, and Mr. Richard Dean secretary and superintendent for the year 1903. The chairman reported that a satisfactory agreement had been signed by the secretary of the London Dahlia Union on the one hand, and the secretary of the London Exhibitions, Limited, Earl's Court, on the other, for the exhibition of the Union in the coming year to take place at Earl's Court in the spacious Prince's Hall, close to the entrance to the Exhibition from Earl's Court Station; it is to be continued over two days, and close on the second day at the same hour as the Exhibition does, viz., eleven o'clock at night. Passes for exhibitors will be provided, and the sum of £20 given to the prize list; in addition, all the requisite staging will be provided by the company. This announcement was received with great satisfaction, and the action of the chairman and secretary cordially endorsed. A subscription list was at once opened, and a number of subscriptions have been announced. The date of the exhibition for 1903 was fixed for Tuesday and Wednesday, September 16 and 17. The schedule of prizes will be revised and extended. At the Aquarium show in September last the competition was keen; the entries in the nineteen classes (137 in number) averaged seven in each class. An unusually large number of seedling Dahlias were submitted for certificates, and the committee of leading growers who made the awards to new varieties exercised the most commendable caution in making awards only to such as were of undoubted first class character. Raisers show their confidence in the London Dahlia Union by sending in novelties in such large numbers; and they are dealt with in a manner calculated to command the confidence of Dahlia raisers generally.

**Violet Classes at Flower Shows.**

The efforts of Messrs. Isaac House and Son, the pioneers of Violet-crossing and culture in this country, in taking collections of these humbly beautiful flowers to many shows throughout the country, are having their reward, for already many horticultural societies are adding classes for Violets as a feature of their schedules. We might also refer to classes for Shirley Poppies, too, which are being provided at least by some societies in Surrey.

**Royal Meteorological Society.**

The first meeting of this Society for the present session was held on Wednesday evening, the 19th ultimo, at the Institution of Civil Engineers, Mr. W. H. Dines, M.A., President, in the chair. Mr. F. Campbell Bayard read a paper on "English Climatology, 1881-1900," which was a discussion of the climatological data printed in the "Meteorological Record" from the forty stations of the Royal Meteorological Society, which have been continuous for the whole of the twenty years. The elements dealt with by the author are: (1) temperature at 9 a.m.; (2) mean minimum temperature; (3) mean maximum temperature; (4) relative humidity; (5) amount of cloud; (6) rainfall; and (7) number of rainy days. The results form a valuable contribution to the climatology of the British Isles. A paper by Mr. C. V. Bellamy, M.Inst.C.E., on "The Rainfall of Dominica," was also read. This was in continuation of a former paper on the subject, and dealt with all the available rainfall data for the Island of Dominica. From this it appears that the mean annual rainfall of the island is 110in. In the neighbouring Island of Montserrat a remarkably heavy rainfall occurred during the night of November 28-29, 1896, when as much as 20.13in fell in the space of six or eight hours.

**An Ascent of La Soufriere, St. Vincent.**

Mr. J. P. Quinton and Mr. E. W. Foster, of the Botanic Stations of Sierra Leone and Lagos, on the West Coast of Africa, and both old Kewites, having returned to England about two months ago for rest and to recuperate their health, were sent by Sir W. Thistleton-Dyer, Director of the Royal Gardens, Kew, on a trip to the West Indies, that they might compare the work of the stations there with that of their own in Africa. The following cutting from the "Sentry" of October 31, published in Kingstown, St. Vincent, has been sent to us by Mr. Quinton, and relates to a daring visit made to La Soufriere there, lately so active:

"Favoured by fair weather, Mr. H. Powell, the Curator of the Botanical Station of St. Vincent, and Messrs. J. P. Quinton and E. W. Foster, of the Botanic Stations of Sierra Leone and Lagos respectively, made an ascent of the Soufriere on the leeward side on Tuesday morning, October 28, and spent an hour and a half on the summit of the mountain. In view of the fact that the crater has been daily emitting large volumes of steam, sometimes accompanied by ashes, since the eruption of October 15 and 16, this ascent is considered a daring feat, and Mr. Quinton stood on the west rim at a point that enabled him to advise them how far they could proceed, whilst Mr. Foster and Mr. Powell went down into the crater at a distance of about 120yds, as far as they could reach having regard to their immediate safety, and from that point, after which the walls assume a precipitous form, they saw right down to the bottom, where the apparently muddy water was boiling furiously. The journey from the sea shore at Wallibou to the first ridge leading to the Soufriere is exceedingly difficult, several new cliffs and ravines having been formed there; but afterwards, except for the still more narrow knife ridges than after previous eruptions, the road is easier. Arriving on the summit, after the toilsome journey of two hours and a half, the visitors found the old crater active, discharging volumes of steam and throwing up numerous cones of ashes to a height of 30ft or 40ft from a fissure close under the southern wall. The crater has assumed more of a funnel shape, being deepest in the centre. The ejecta is heaped up round the inner walls to a height of several hundred feet, and is almost red hot and smoking profusely. From a fissure in the rock, within 4yds from where the visitors stood, jets of steam were issuing; and from about this same spot on the following morning vapour and ashes were seen to escape in large volumes. The configuration of the mountain is very much altered."





### Pergolas and Roses for Them.

The following notes are from an essay by Miss Jekyll, V.M.H., which appears in the Royal Horticultural Society's Journal, vol. xxvii., part 1:

"It is only of comparatively late years that we have borrowed the pergola from the gardens of Italy. The simplest form of pergola in Italy is made of stout poles guiding and supporting the trunks of the vines, connected across the path by others of less diameter, with a roofing of any long rods laid lengthways along the top. This is repaired from time to time by putting in fresh uprights or other portions in the careless, happy-go-lucky way that characterises the methods of domestic and rural economy of the Italian peasant or small proprietor. Often in Italy one sees solid piers of rubble masonry coarsely plastered, either round or square in plan, or even marble columns from ancient buildings. These have a more solid wooden beam connecting them in pairs across the path, and stouter stuff running along the length. For our English gardens we have the choice of various materials for the main structure. If the pergola is to be near enough to the house to be in any sort of designed relation to it, and especially if the house be of some importance, the piers should be of the same material as the house walls—brick or stone, as the case may be. Fourteen-inch brick piers laid in cement are excellent and easily made. Such piers may be said to last for ever, and if it is desirable that they should not be red, or whatever may be the normal colour of the brick used, it is easy to colour them in limewash to suit any near building. For association with refined brick building bricks are sometimes moulded on purpose of thinner shape, either square or half-round in plan, the latter being for piers that are to show as round columns. Brick, stone or marble, or wooden columns are also used in refined designs. For more ordinary work the piers may be of Oak trunks of a diameter of 8 in. to 10 in. These, if tarred or charred at the butts high enough up to show a charred space of a foot above the ground-line, and put into the ground like gate-posts, will last from fifteen to eighteen years, or have about the lifetime of an ordinary field gate-post. A better and more enduring way is to have the posts of Oak 8 in. square, set on squared stones that stand a foot out of the ground, with a stout iron dowel let into the foot of the post and the top of the stone. Unless the appearance of the Oak post is desired, there is little, if anything, to choose in point of cost between this and the solid brick pier, as the Oak has to be squared and the plinth shaped and bedded on a concrete foundation.

"Whatever may be the kind of post or pier, it is important to have them connected by good beams. The beam ties the opposite pairs of posts or piers together across the path. In the case of brick or stone piers it should be of Oak or Larch 7 in. to 8 in. square, not quite horizontal, but slightly rising in the middle. This is of some importance, as it satisfies the eye with the feeling of strong structure, and is actually of structural utility. It is, of course, possible to make a pergola of iron with very flat arches, and supporting rods and wires or wire netting for the top; but it is the material least recommended, and the one that is the least sympathetic to the plants; indeed, in many cases contact with the cold iron is actually harmful.

"A modification of the continuous pergola is in many cases as good as, or even better than, the more complete kind. This is the series of posts and beams without any connection in the direction of the length of the path, making a succession of flowering arches; either standing quite clear or only connected by garlands swinging from one pair of piers to the next along the sides of the path, and perhaps light horizontal rails also running lengthwise from pier to pier. This is the best arrangement for Roses, as they have plenty of air and light, and can be more conveniently trained as pillars and arches, while the most free-growing of the Ayrshires and hybrid multiflora ramblers willingly make swinging garlands. Roses are not so good for the complete pergola.

"For the open pergola without top, Roses are among the best of plants: on one post a pillar Rose and on the other a Rambler. A select list for this use would be: as pillars, *Alister Stella Gray*, nankin yellow; *Reine Marie Henriette*, red; *Climbing Aimée Vibert*, white; *Carmine Pillar* and *Waltham Climber*, No. 1, reds; and for ramblers, the *Garland*, *Dundee Rambler*, *Bennett's Seedling*, and *Madame Alfred Carrière*, all white or flesh white; *Crimson Rambler*, *Reine Olga de Wurtemberg*, *Longworth Rambler*, and *Dawson*, reds; as well as multiflora single and double, the large-flowered multiflora, and *R. Brunoni*. To keep the bases of the piers clothed, some strong young shoots of the current year should be shortened so as best to cover the space, when, instead of making the whole length

they would otherwise have attained, they will stop growing at the tips and throw their strength into preparation for flowering shoots at the lower levels."

#### National Rose Society.

The annual dinner, with Mr. E. Mawley in the chair, will take place on December 11, at 5.30 p.m., after the annual general meeting in the Hotel Windsor. In the business to be brought before the general meeting there is a proposed addition to Regulation 13, as follows: "A Sub-Committee has been appointed to draw up a proposed addition to Regulation 13, which will give further directions as to the award of Gold Medals to new seedling Roses." A copy of the proposed addition to Regulation 13 will be distributed at the meeting, or can be had previously on application to the hon. secretary.

### THE OUTDOOR TOMATO CROP.

Outdoor Tomatoes have always been considered to be a crop which depends very much on the season for its success, or otherwise; but the series of ten, more or less dry years, during each of which it has been possible to grow this crop with some success, had gone far to remove this impression, and tempt growers to plant more and more. This season, however, again brings the fact very forcibly on our notice, and shows that it must always be a risky undertaking, for outside Tomatoes have been an almost universal failure. Even in sheltered gardens, where they have every chance, they have only done well in a comparatively few favoured spots; and in most places where field crops have been attempted scarcely any, and in some cases no fruit, has been ripened on the plants. The writer has seen one case in which a grower, encouraged by the success of a crop, one acre in extent, in the previous year, this year covered five acres with some 40,000 plants, which did not produce sufficient fruit to nearly pay the heavy expenses of producing, planting, and other attention, to which must be added a considerable expenditure on pots and stakes. In this case the planting-out was done under very promising conditions at the end of May and beginning of June, the soil being in excellent tilth, and several light showers following the operation to give the plants a good start. Growth was rapid, and fine large plants were quickly produced, and subsequently gave a very good show of bloom, so that thus far everything looked very hopeful; but when the time came for stopping the growth by nipping out the growing point, which usually takes place about the middle of August, when four trusses of bloom have been formed on most plants, it was evident that unless there should be an extraordinary change in the weather there could not be a great amount of fruit ripened, for very little had set; whereas at this time the lower trusses would, under normal conditions, consist of fruit already swelled to a considerable size.

Thus, a certain amount of disappointment was anticipated; but only on the score that the warm, sunny season would not extend far enough into the autumn to allow of any great quantity of fruit coming to perfection. Nothing was thought about disease, which now began to make its appearance; first attacking the leaves, then the fruit, and ultimately sweeping off the whole crop, with the exception of a few fruits here and there. The disease which attacked this crop, and many others as well, was the common Potato disease (*Phytophthora infestans*), which has been so very prevalent among Potatoes all over this country and part of the Continent this year, and which is well known to attack other species of *Solanum*, and particularly the Tomato. It first makes itself evident in brown blotches on the leaves.

These blotches soon spread over the entire surface of the leaf, causing it to curl up. At length the leaves and stem are turned black, and blotches appear on the fruit, even green fruit being affected when the disease is very bad, as it was this year. No doubt this could have been checked to a great extent if spraying had been resorted to when the disease first made its appearance, and thus the fruit saved and part of it ripened. Bordeaux mixture would have been the most efficient fungicide to use for this purpose; but it has the great disadvantage of spotting the fruit, so that, unless washed by rain, it would have to be wiped before being fit for market or the table.

It is, probably, not wise to save seed from infected Tomatoes or from fruit taken from infested plants, though it has not yet been proved whether this disease, and others, can be passed on in this way. This fact ought to be settled by experiment, for the case is not analogous to that of the Potato, with which the whole infected tuber is used for seed, and remains in the soil in contact with the newly-formed tubers, so that the disease has every chance of spreading. In the case of the Tomato only the fleshy part of the fruit is apparently affected, whilst the seeds are to all appearance clean, so that there is a chance that they may not carry disease spores, especially as they can easily be dressed so as to kill any spores adhering to the outside. However, it is not good policy to take seed from a weakened stock unless there is some particular reason for it, such as the maintenance of some special stock or variety.—B.

## Botanic Gardens.

(Concluded from page 468.)

The Oxford Botanical Gardens, like that at Cambridge, is the property of the University, founded in 1632 by Henry, Earl of Derby, who endowed it as a Physic Garden. It is the oldest institution of its kind in Great Britain and Ireland, occupies five acres of ground; for 400 years previously it was used as a Jew's burial ground. The old glass houses were replaced in 1893-4 by a range of five houses.

The gardens are open until six p.m.; the houses from two till four. The library, museum, and herbarium may be visited by permission of the Professor of Botany. Jacob Bobart, a German from Brunswick, was the first appointed curator, although John Tradescant is said to have been the first gardener here. Bobart was followed by his son, whose list of the plants cultivated in 1648 contains 1,600 species and varieties, nearly 600 of these being native plants. The Oxford garden, though the oldest, can hardly be said to have moved with the times; they still have only the five acres surrounded by a high wall. There has been a good deal of discussion about having a new site, as the present one cannot be extended. Some people are reluctant to part with old associations.

The Physic Garden, Chelsea, was founded 1673, at an annual rent of £5, for a term of sixty-one years. A wall was built round it in 1674, and the gateway is dated 1686, which is supposed to be the date when the collections of plants were arranged. In 1732 Sir Hans Sloane, a great traveller, bought some ground which included this garden, and he gave it to the Apothecaries' Company, conditionally that it was always kept as a Physic Garden.

Philip Miller was made curator. Another condition of the gift was that the society was to give fifty new plants each year to the Royal Society until they had given 2,000; this they continued until 1773, and gave in all 2,550 specimens. We cannot here go into all the ups and downs of this old historic garden.

In 1899 the garden was reconstructed, and a new curator, Mr. William Hales, of the Royal Gardens, Kew, was appointed. For many years previous to this the gardens had been going from bad to worse, as the Apothecaries' Society found it too expensive, and it would have fallen into the hands of the builder had not a hue and cry been set up against such a step being taken. The Charity Commissioners took action, promising to find money for its upkeep; a committee of management was appointed, and all that has since taken place is well known from the recent notices in the gardening papers. I have paid a recent visit to this old historic place, and am glad to say that Chelsea is again flourishing under its young and able curator. May it long continue so is my sincere wish.

The first physic garden in this country was that of Gerard, established at Holborn, in 1567. John Gerard was not only a physician, but also a practical gardener. His own garden, according to a catalogue published by himself, contained nearly 1,100 kinds; quite a large collection for those days. He was also for twenty years superintendent of Lord Burghley's garden. In Johnston's edition of Gerard's "Great Herbal" are mentioned 2,717 kinds of plants.

The new Botanical Gardens opened at New York contain 250 acres, large glass houses, and a very imposing and substantial building for the herbarium, and they are rapidly acquiring large collections for it and the gardens. This

promises to be a fine institution, and one worthy of the United States.

Most of our colonies have either botanic gardens or botanic stations, at which are grown and propagated in large quantities such plants as yield either food, medicine, material for clothing, or manufactures, and distributed to the planters (often gratis) for the development and prosperity of their respective countries. Altogether there are many such gardens, and the men who have charge of them are selected from Kew. It is impossible for me to treat more fully in this lecture on these colonial gardens, and the useful work which they do. Notes and illustrations are, however, often to be seen in the pages of the gardening papers.

Of British botanic gardens, those at Kew are not only by far the largest and most important in this country, but also in the world. Other botanic gardens in England are Birmingham, Bath, Liverpool, Regent's Park (London) belonging to the Royal Botanic Society, and another rather small one at Bury.

In Scotland, besides Edinburgh, there are the following: Glasgow, Aberdeen, and one at St. Andrew's University. The Glasgow garden is more devoted to the ornamental and decorative use of plants rather than the purely botanical arrangement of the collections. This is not to be wondered at now that it is managed by the Town Council. In Ireland we have one at Cork, Belfast, and Trinity College Gardens, Dublin, in addition to that already mentioned at Glasnevin. — ALBERT HOSKING.



Southampton Show: A general view of the Fruit Section.

## Killerton, Devon.

The notes furnished on pages 496 and 497 relating to the magnificent trees at Devon will be further emphasised by the addition of the short table which Mr. J. Coutts

has supplied, and which is given below. I had omitted to mention that graceful shrub *Nandina domestica*, with bushy sprays of its pinately cut leaflets and panicles of pretty white flowers, plants of which are in the grounds. *Trachycarpus* (*Chamaecarpus*) *excelsus* is well represented, and it is proposed to line both sides of a short open-air drive or avenue with these members of the Palmæ. *Lavender* was not to be found at Killerton two years ago, but the present gardener is nursing a goodly stock of it for prospective liberal plantings. He already has a broad border filled with it, through amongst which is planted the White Lily (*L. candidum*).

In a cosy corner between a garden wall and one end of a vinery there is a luxuriant *Eupatorium odoratum*, which has attained to woody growth towards the stock, and reaches over 7ft high. Its robust shoots were laden with the pale whitish flowers in the middle of November, and its glossy green leaves were very handsome. As a rule, this plant is grown in pots for the greenhouse. *Abelia rupestris* also called for notice by reason of its vigour; while *Clianthus puniceus*, the Glory Pea, is remarkably rampant on a doorway in the same corner, and flowers very freely. Growers northward will envy Mr. Coutts in having climate so mild and balmy. I have now done with the shrubs, and append the list referred to above:—

|                                 | Height. | Girth at 5ft. from             |
|---------------------------------|---------|--------------------------------|
|                                 | ft. in. | base.                          |
|                                 | ft. in. | ft. in.                        |
| <i>Sequoia gigantea</i> ..      | 85 0    | 13 6                           |
| <i>Sequoia sempervirens</i> ..  | 75 0    | 11 4                           |
| <i>Cryptomeria japonica</i> ..  | 70 0    | 6 6                            |
| <i>Fitzroya patagonica</i> ..   | 10 0    | 2 6                            |
| <i>Libocedrus decurrens</i> ..  | 65 0    | 5 6                            |
| <i>Cunninghamia sinensis</i> .. | 60 0    | 5 9                            |
| <i>Thuopsis dolabrata</i> ..    | 25 6    | This has no girth to speak of. |

In borders 1½ft broad, and specially prepared, Irises have been planted. These narrow borders run in line with and close



against a number of the glass houses. Such species as *Gatesi* and *susiana* of the Cushion Irises are already established in their comfortable quarters, and quite evidently happy. The handsome proportions of the flowers of the *Oncocyclus* group, and the beautiful veining in the segments, made them most valuable garden plants, though their culture demands considerable knowledge and care. The bulbous Iris, as *alata*, *reticulata* (and its varieties), *Bakeriana*, *Vartani*, and *orchioidea* were all found to be doing well, and growths were already prominent peering through the soil. Each species has a little cubicle to itself. Along with these Irises there are some brilliant species of *Tulipa*, and also the choicer varieties of *Daffodils*. The rarely grown *Iris japonica* is in pots under glass, but will be planted out very shortly.

At this season of the year the crimson-red *Ixia*-like flowers of *Schizostylis coccinea* are very generally prized for conservatory embellishment, but with fair winds and mild airs, at Killerton it is massively planted in the open. From one degenerated clump of this Iridaceous plant the offsets were secured, and were planted at equal distances apart and in lines in a sheltered border. The result is a gay crop of utilisable blossoms now, but a light wooden framework has been erected over the whole body of the bed, so that a tiffany screen may be rolled over in case of frost. *Iris stylosa* has been treated on the same lines, and the large bed is now yielding a supply of the beautiful flowers, and will continue on till March. *Iris Kämpferi* has been planted around a water fountain and pool in the centre of the kitchen garden.

The fruit trees having been neglected during latter years, the new gardener has begun a work of improvement. Old trees are in places giving place to new ones, and the best of the established trees are receiving treatment in accordance with their requirements. Brown Turkey Fig crops freely, and finishes its fruits on open sunny walls. Peaches, of course, are as common as Pears and Cherries, while Apples are cultivated in every form. Most of the trees are named. Amongst novelties, the Japanese Wineberry is somewhat liberally grown. The fruit walls are good on the whole. Some parts of them are plastered, and have a smooth surface, with wires for the trees. In the fruit room Mr. Coutts was able to show me some beautifully modelled fruit—large clean, and bright. He speaks highly of Roundway's *Magnum Bonum* Apple as a cropper at Killerton, and referred to Mr. George Bunyard's opinion of it, which in his firm's fruit catalogue I find expressed thus:—"Large; an old variety almost fallen out of culture, we have no hesitation in calling it the best dessert kind. It is melting in flesh, very aromatic and richly flavoured, brisk, and agreeable; fruitful on Paradise, and worthy of a place in the most select garden list. Much richer in flavour than Cox's Orange or Ribston, and only needs to be tasted to secure appreciation. Do not gather too early, and try on a wall, in cold soils. In tarts or baked it is a perfect sweetmeat. It is in use from November till February."

The brightly-coloured Devonshire Quarrenden crops well; and of Newton Wonder the opinion here is that it will take the place of *Dumelow's Seedling* (Wellington). *Bramley's Seedling* is very reliable; *Fearn's Pippin* is grown, and produces nice fruits; *Egremont Russet* is certainly one of the best, and has a rich flavour; *Belle de Pontoise*—a large Apple; also *Emperor Alexander*, of which some beautiful specimens were on view. *Wyken Pippin* was another of the favourites, and is a good old orchard variety well deserving of further attention. *Peasgood's Nonesuch* and *Cox's Orange Pippin* received the usual commendations. Of *Lady Henniker*, a December fruit good for dessert or cooking, some fine fruits were shown to me, and *Blenheim Orange* has a great reputation as a marketable variety. Having a large surplus stock of its fruits, Mr. Coutts sold one-and-a-half tons, and received at the rate of 8s. per cwt. for them. These were sold locally, with little incumbent expense, and at that price Apple culture, he says, would pay him. *Mère de Ménage*, as orchard trees, produces good saleable fruits. Amongst varieties of Pear I specially took note of his samples of *Verulam*, *Catillac*, *Vicar of Winkfield*, *Winter Nelis*, *Glou Moreeau*, *Duchesse d'Angoulême*, *Beurré Hardy*, *Eyewood*, and *Beurré Rance*.

Violets are successfully cultivated in frames, the usual popular sorts being seen in an abundantly floriferous condition. Border Carnations are somewhat largely grown, and hardy flowers in general receive great attention. Wall gardening, on a limited scale at least, will be another feature of Killerton as time advances. My visit to Sir Thomas Acland's beautiful estate will long be pleasantly remembered, being, as it was, a first visit to Devon, and made at a period of glorious autumn sunshine.—J. H. D.

#### The Difficulty of "Chrysanthemum."

During the hearing of a charge at Thorpe (Essex) Petty Sessions recently of damage to flowers the prosecutor stated that the defendants had smashed his greenhouse and pulled up his "Christian anthems." The magistrates' clerk, mildly: "Chrysanthemums," you mean. Prosecutor (firmly and with dignity): "Christian anthems," I said, sir.—"Daily Mail."



#### Mr. Godfrey's Collection at Exmouth.

The show season for Chrysanthemums is past, but the memory of the flowers is present. I was fortunate to be at Exeter three weeks ago, when exhibition Chrysanthemums were meeting the gaze at every turn, and from Exeter the train journey along the left bank of the estuary to Exmouth is but half-an-hour. Mr. W. J. Godfrey has given Exmouth a fame in the minds of Chrysanthemum growers from his export of novelties remarkable for their fine build, and the brightness of colour in most of them. On page 449 of the Journal for November 13, reference was made to the gems of 1901-02, and the subjoined notes convey my impressions of the latest comers, some of which are already exceedingly popular. Take for instance the lovely *Bessie Godfrey*, than which no unitary Chrysanthemum is prettier. The blending of palest straw or primrose on the edges and tips with the rich canary-yellow overlay in the middle part of the florets, endows the bloom with the greatest charm, and the elastic curve of the petals is another point of attraction. Everywhere during the closing season I have heard praises of *Bessie Godfrey*, and seen good flowers of it. Both late and early buds yield good blossoms.

*Mrs. D. V. West*, a white Australian seedling, retains its foliage better, and comes easier than *Madame Carnot*, and is in all respects a good variety. *Wilfred H. Godfrey* has flat reflexing florets, rich crimson on the surface, and gold reverse, and is one of the most promising of the novelties. The constitution is good. Loveliness was sent out last year, and has been seen in many places during this autumn. The flowers are massive, the petals very broad, not smooth, but lined, and the colour is a delicate canary-yellow. It is one of the very best exhibition flowers, and good for purely decorative uses, and large blooms seem to be easily obtained from the plants, they being decidedly pleasing to the eye.

*Colonel Weatherall*, a Japanese incurved, has a robust constitution, the plants at Exmouth having heavy green leaves and stout stems, and is of medium height. The broad petals are bronzy-orange, the centre of the flowers being bright yellow. *Wallace E. Vowden* bears good blooms, with abundance of incurving florets, but the colour seems rather dull. *Durban's Pride* is a Californian variety, one of the few good Americans that have succeeded here. It has something of the *Madame Carnot* or *Mrs. T. W. Pockett* stamp upon it, and as it is a pretty lilac-pink with a white centre, I shall look to seeing *Durban's Pride* largely grown by the end of next autumn.

*Duchess of Sutherland* has obtained a considerable reputation this year, and is one of the best up-to-date yellow exhibition flowers. At Exmouth, however, the plants were of rather straggling habit. *Nellie Stevens* throws massive blooms of a bronzy-buff colour, and is an attractive incurved var.; while *Mafeking Hero* is undoubtedly one of the best varieties for large flowers in existence. On page 448 of this Journal Mr. E. Molyneux says: "The blooms when fully developed measure 9 in in diameter, carrying a depth of quite 6 in, which is a good proportion. The colour is dull red, the reverse being gold. The tips freely turn upwards, giving added character to the flower." It has already won repute. *Kimberley*, now well known, is another producer of huge blooms, and is a reliable early yellow. In the same category comes *Calvat's F. S. Vallis*, of which splendid blooms have been exhibited this year by the champion whose name it bears. But *F. S. Vallis* has been shown by Mr. Godfrey much better than by the "champion." The latter admits that the Exmouth flowers were much superior. Mr. Godfrey had twelve flowers in his stand (as a centrepiece) at the Aquarium in November. It does not require "a lot of doing"; indeed, it is one of the easiest to do, and will become very popular from this fact. It is a decided beat on *G. J. Warren*. *Mrs. John Balfour* is a pretty pink seedling from *Madame Carnot*, with long reflexed petals, and is one of the Exmouth novelties for 1903. It was much admired at the Aquarium, where it was shown as a "seedling from *Madame Carnot*."

I would conclude these notes on the Chrysanthemums by noticing a few of the foremost purely decorative sorts. *Scarlet Prince* is of dwarf habit, with flowers that are quite scarlet in the height of the season. When Chrysanthemums are brightly coloured, they ARE; that is to say, the richness of their tones is intense, and we have had quite a goodly selection of fine things during the last three years. *Goacher's Crimson* comes

to mind; Horace Martin is another, Jessie Cottee a third, Etoile de Feu a fourth, and others are known. Scarlet Prince in November (late plants) was brick-red orange with gold tips. Brightness is one of Mr. Godfrey's latest seedlings, coming at its best in November. It is of the brightest crimson, with a gold centre. Happiness is a golden-orange with red basal florets, exceedingly floriferous, and a good late decorator. The Fairy I strongly recommend for the lighter forms of decorative work. It is a beautiful pink and white. Grace is one of the very largest single whites, and has long stems. It is one of the best for cutting. Exmouth Rival, the Japanese, furnishes an exceedingly good decorative flower, the colour being intensely rich. Golden Prince is one of the richest yellow Chrysanthemums in existence, and will prove the market yellow for December cutting; it is a novelty for 1903.

Mr. Godfrey may have some further startling additions to offer to Chrysanthemum growers another season; at any rate, his efforts are directed toward that end. In one of his span-roofed houses he had a regiment of plants from the flower heads of which the florets had been cut back with scissors, so as to expose the pistils and stamens. Overhead runs a horizontal hot-water pipe, with an inch bore, and to this the flower heads are suitably tied—the plants being raised, where necessary, to allow of this. A gentle heat is maintained through the pipe, so that the immediate atmosphere surrounding the fertilised flowers is always sufficiently warm and dry. Mr. Godfrey's seedlings are noted for their compact dwarf habit and the brilliance of their flowers.—VIATOR.

#### Selection of Japanese Varieties.

I can assure "O. L." that what little I write about new Chrysanthemums is a pleasure to me if the information given is of some service to beginners, especially if they reside in the country and have not the same opportunity that I have of inspecting the new varieties. In the last issue of the Journal, "O. L." will find three excellent white flowered varieties. Of the seven named by "O. L." but three—Mrs. J. C. Neville, Miss Mildred Ware, and General Hutton—are known to me. The last named has been repeatedly shown during the late season in capital condition. Miss Mildred Ware is quite new, and certainly should be added to every collection, no matter how small. To avoid an invidious selection from the three distributors quoted, I prefer to name nine distinct varieties from the selection given in the Journal. The reason for adopting such a method as I propose must be apparent to all, viz., Two firms do at times jointly distribute one variety. For instance, Miss Mildred Ware is being sent out by Messrs. Davis and Jones. How, under such circumstances, can the preference be given to one? The varieties are W. Duckham, rose pink; Mr. F. S. Vallis, soft yellow; Mr. S. Fryett, rose amaranth; Miss Elsie Fulton, white; Bessie Godfrey, rich yellow; Miss Mildred Ware, cerise, flushed with brick red; Madame Paolo Radaelli, pale pink, flushed rose; Lily Mountford, creamy white, flushed and striped rose; Mafeking Hero, red with golden reverse. The suggestion given by "O. L." regarding the analysis is not too late, and no doubt the electors who are now busy making their selection will bear in mind what is said by "O. L."—E. MOLYNEUX

#### Chrysanthemums at Belfast Show.

I have thought that some of your readers might like to hear a bit of Mums at the Belfast show, but I am not going to attempt a list of exhibitors. I saw there the finest flower of Mrs. T. A. Compton I ever remember, not that it is a graceful flower at any time, but this was a splendid flower of its kind, 9in across and fully 9in deep, and perfectly finished; not a bad petal. This was exhibited by C. E. A. Allen, Esq. (Mr. H. Jackson, gardener), Stormont Castle, but not in competition. I also saw in the first prize vases three splendid flowers of T. Humphreys. This I should say was the champion vase in the show, or at least it received most attention amongst exhibitors, especially as it was a novelty of last spring. The flowers were fully 7½in across and 6in deep, drooping gracefully, and showing the lovely deep chestnut colour. It was a truly glorified E. Molyneux. Single-flowered varieties are always a pretty feature at Belfast. I might mention other things about the show, but that is not my object. My object is to refer to a thing which struck me immensely on each day at the opening of the show. The first day there was a fashionable crowd of people outside the entrance, more than I ever saw outside a London theatre, awaiting the opening at twelve o'clock. Then there was a living stream entering for about an hour. Some of the officials estimated the attendance at nearly 5,000. The admittance was 2s. 6d., or by tickets (subscribers' or otherwise). I was thinking: What would lots of our societies over this side think of such an attendance at the opening? But then it was not an ordinary exhibition At all! At all!

The St. George's Market was prettily decorated and festooned, for the Lord Lieutenant and Lady Dudley were coming to open the show; it was indeed very kind of them. But they must

have felt gratified at the reception they had. The King himself could not have received a more hearty welcome. And the Ulster Horticultural Society's committee members must have felt, and did feel very gratified. One can only say it was a blessing after such a flooding as they had at their last show. Then the second day, about 10 a.m., there was another gathering of quite a different character. All the children from the Training Schools Union, deaf and dumb, &c., were invited, free, and were left to their own free will, to go as they pleased, and yet not a flower or fruit was touched. When they left each and every one was presented with a bag of buns and sweets and an Orange and Apple. I don't know who seemed the happier, the givers or the receivers, for the givers were in their element. It created and left a feeling of warm regard for the Ulster character in the heart of yours truly—W. WELLS.

#### Chrysanthemum S. T. Wright.

On page 492, "W. W." calls attention to Chrysanthemum S. T. Wright, and it would be interesting to know what height the growth of this Australian will attain. In the Exmouth Nursery I saw many of the latest Australian crimsons, including T. Humphreys, Mrs. C. J. Salter, and Henry Barnes, which were catalogued as growing 5½ft; but here they were nearer 10ft. The colour was very rich, but the flowers were much undersized. In the same house were a large number of plants of Exmouth Rival, not one of which exceeded 4ft in height, and the flowers were second to none in richness of colour, being also much the largest among rich crimsons I have yet seen. The flowers were not over-broad, but were very deep.—G. FOSTER.

#### New Incurveds.

New varieties possessing merit are but slowly added to this section, and to be an advance upon existing varieties further limits the addition. As a rule, the best varieties are obtained from "sports," but somehow these freaks are few and far between nowadays. Present day raised varieties too frequently show much Japanese blood in the florets, rendering them much too coarse to belong to a typical incurved bloom, which should be of the globe type, with closely, even incurving florets, quite smooth on the surface. Yearly some few deserving varieties are added. The following are the best of those that have come under my notice:—

MRS. JOHN SEWARD would be well described as a buff or cinnamon Topaze Orientale, as in build and petal it partakes of that variety quite closely.

SOUVENIR OF W. CLIBRAN is best described as a giant form of Nellie Threlfall, having the same kind of floret and colour.

WM. BIDDLE has long closely incurving florets, with a base of pale chestnut and a yellow centre.—E. M.

#### New Decorative Varieties.

Now that Chrysanthemums are so much more cultivated for home decoration than formerly, any addition to this section possessing merit are always welcome. The following are deserving of attention, all being November flowering varieties:—

HAPPINESS is one of Mr. Godfrey's raising, is exceptionally free flowering, in colour it is orange red at the base, with a yellow centre; very effective under any light.

BRILLIANT is from the same source, and, as its name implies, is exceptionally bright in colour. In growth it is sturdy, the flower stalks stiff as they should be in a decorative variety; belonging to the small flowered Japanese section.

GRACE is a single flowered variety, with extra long semi-drooping florets, and a clear yellow disc. The colour is the purest white; quite a gem for cutting.

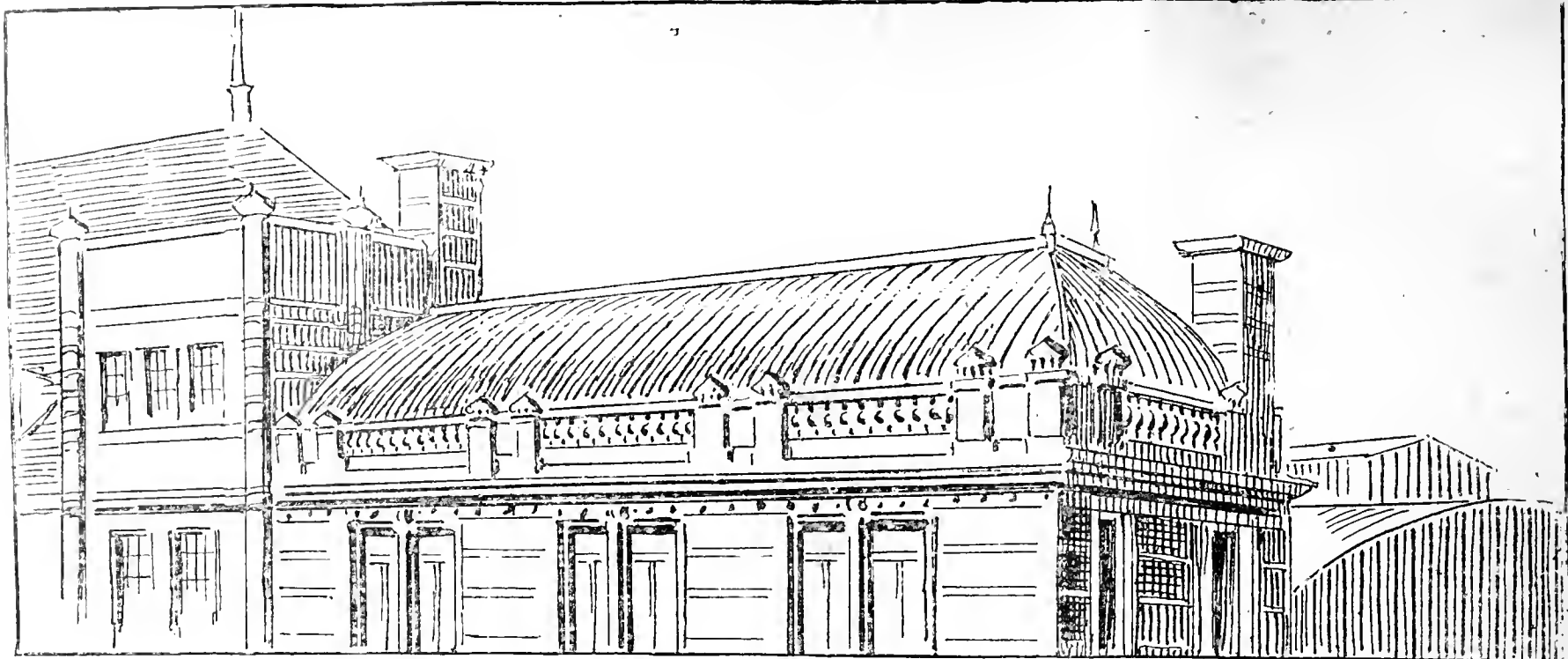
MADAME C. NAGELMACKERS has narrow, semi-drooping petals of the purest white. The blossoms are quite full in the centre, not too large, and flowers abundantly. This promises to be one of the best of decorative Chrysanthemums, either as a plant or in a cut state.

MRS. E. ROBERTS is a seedling from that favourite single flowered variety Mary Anderson. The newcomer is a deep rose pink, very free flowering, with extra stout peduncles.

LOI FULLER.—This semi-drooping, narrow petalled variety reminds one of Belle Paule in colour, white edged with purple.

VERTE PORTIVINE is a small flowered Japanese variety, yellow shaded green, quite a novel and interesting variety.—E. M.





The Horticultural Hall. The "Journal's" Roof-plan No. 1.

## The Horticultural Hall.

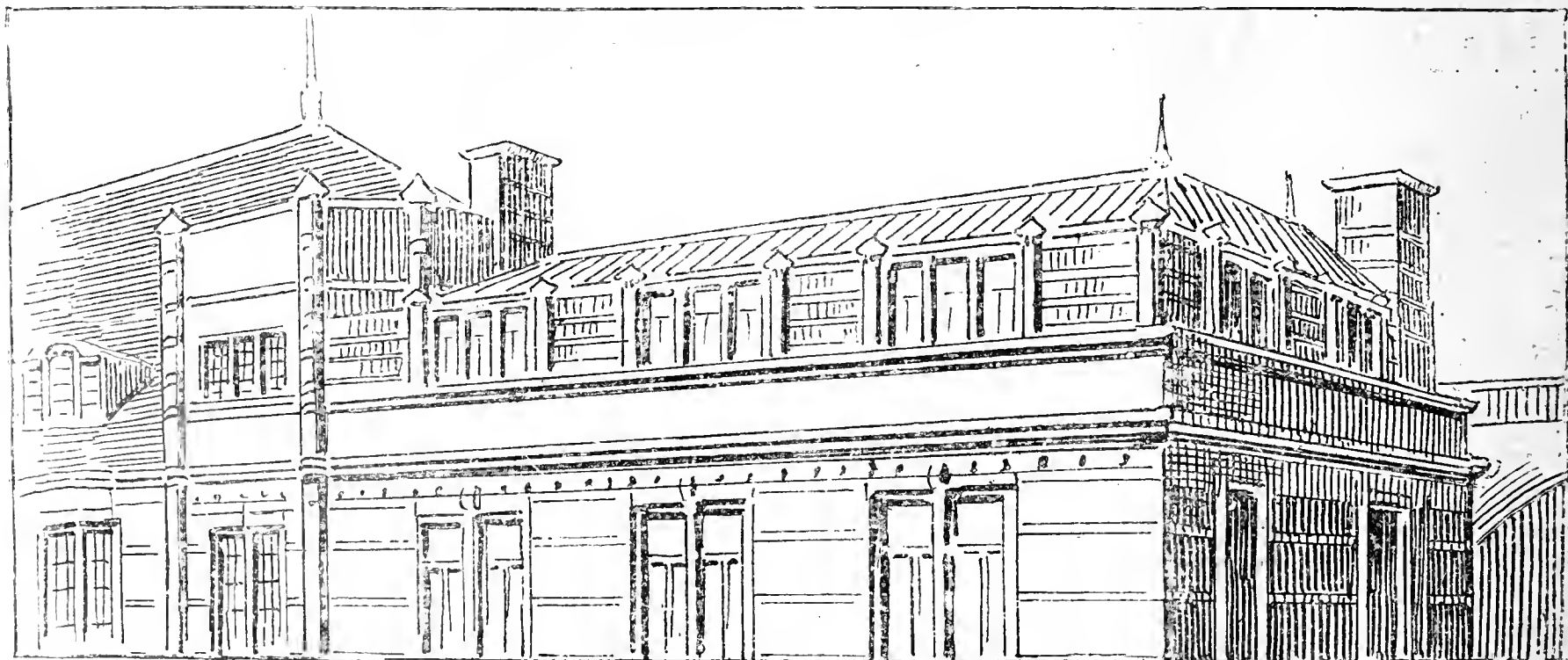
Following up the remarks which we made last week regarding the ground plans of the three first floors of the Horticultural Hall, we again enter upon the subject. Since that time we judge by the letters which are reaching us that the criticisms we have ventured to pass upon this long desired temple of British Horticulture are by many not considered to err upon the side of severity. Indeed, like Lord Clive, we may well be astonished at our moderation. Having respect to the great difficulties the Council has had to encounter, and to the present modest dimensions of the building fund, we have suggested merely an inexpensive alteration in the design of the roof. But our correspondents attack the proposed plans in the same comprehensive spirit in which the Highlander passed criticism upon his gun, which ironically suggested its improvement into a completely new one. They would have entirely fresh designs.

If the centenary were not so near, and if more time remained for the augmentation of the subscription list and the elaboration of fresh plans proportioned to a larger building expenditure, such a policy might not be unwise. All these demands for a general reconsideration of the scheme, however, involve in the end a much greater cost, and this sum can only be secured by the usual methods adopted by enthusiastic churchwardens and speculative Australian sheep-farmers; to wit, a mortgage on the church or farm of a similar amount to the capital in hand.

If the Council is daring enough to reckon upon subscriptions

to the amount of £30,000 in eighteen months, and then to give a mortgage for another £30,000 pending the time when millionaire Fellows of trans-Atlantic extraction are as plentiful as stolen turkeys at a negro thanksgiving, the present plans might be postponed, or recast for a more pretentious programme. At the rate millionaires are appearing on the Western horizon, such a Napoleonic policy of tempting Providence might, after all, not find its termination in a Moscow, Leipsic, or Waterloo. The American "wakefulness" preached by the halfpenny newspapers consists, like Bonaparte's, of recklessly discounting the future, and it sometimes succeeds. If, therefore, the Council feels sufficient of this spirit of modern progress surging in its veins, some action should at once be taken to reconsider the matter of the hall *de novo*. If not, all efforts should be directed to temperately modifying the existing plans.

Every effort should be made to raise a structure which, if it cannot out-rival, will at least hold its own with the handsome residential blocks which are destined to rise around Vincent Square and everywhere in Westminster during the next thirty years. In support of our contention expressed last week, regarding the unsightliness of the slate roof, we this week publish two suggestive sketches of what could be done to give increased dignity to the building. They are the work of another Fellow, our artist Mr. Shayler, and are merely intended to show roughly how with a little patience and meditation the Building Committee, in conference with their architect, could effect alterations incomprehensible to ordinary minds, and of which we ourselves do not pretend to furnish more than a vague indication.



The Horticultural Hall. The "Journal's" Roof-plan No. 2.

## Pollen.

With very few exceptions, if we examine the flowers in our gardens, we shall find in their centres a number of slender projections, upon the tops of which there is a mass of powdery material, which is the pollen or fertilising element of the flower. Having found some of this, it would well repay the observer, if he or she has a microscope of even low power, to scatter a little of this powder over the field of view and study it. Treated thus we shall find that every different species of flower has a differently shaped pollen grain, and that one and all are beautifully fashioned, and often beautifully coloured, dispelling entirely the first idea of its being mere dust of no particular structure.

In point of fact, the pollen grain is one of the greatest

ence in the results it may produce. Although in itself neither a seed nor a spore, we have but to place a grain of it upon the stigma of the flower whence it was taken to see it presently apparently germinate seed fashion, for under such circumstances it will burst its husk and protrude a root-like tube, which will burrow into the stigma like a root into the soil, traverse it from end to end, and, finally, always carrying the little dot of matter aforesaid with it, combine with the embryo seed near the base of the stigma, and so fertilise and fit it for subsequent growth and development.

The stigma varies very much in length in various plants, and hence the pollen grain varies in size, because it needs a greater or less reserve of material to form a longer or shorter tube. Lily pollen, therefore, is large grained, and there are few more beautiful objects than the pollen of *Lilium candidum* or *auratum*, or any of the



The Horticultural Hall. The Council's Plan.

wonders of nature, for within its tiny compass there are enshrined all the potencies of the plant species from which it sprang. We may, however, if we are clever enough, magnify it enormously, and dissect it to the utmost, and yet find nothing but a little gummy matter contained in a sort of husk, and with perhaps a just perceptible dot or nucleus floating within it; and yet it is within that infinitesimal dot that, in some occult fashion, lie the future capabilities of a plant to produce exactly all the manifold characteristics of its parents, or, it may be, the combined characters of several progenitors; or, going even further, it may, in some mysterious way, adopt original plans of its own.

The pollen grains may vary as they will in shape and size and colour, and be gathered from plants as different from one another as the Oak and a tuft of grass, and yet in every case the vital principle within it will be found to be outwardly and inwardly identical—i.e., be a simple cell, despite its difference of origin and the consequent differ-

larger Lilies, it being more or less intensely coloured crimson or orange, beautifully long, oval shaped, and pitted all over with exquisite delicacy. Having grasped the wonderful vital complexity which must exist in the pollen grain to enable it to fulfil its task of transmitting specific or varietal characters both of form and constitution, we shall be the more astonished at Nature's lavish profusion in some cases in the supply of these tiny bodies.

Even in our ordinary garden flowers, which are fertilised by the bee or other insects, the pollen grains enormously outnumber the possible seeds, and every bee-keeper knows that the bee appropriates a very liberal percentage in return for the service rendered in carrying the balance from bloom to bloom, and thus involuntarily mating them. Many trees and other plants, in addition to the grasses, trust entirely to the wind to carry the pollen to the female flowers, which are frequently borne on other trees or smaller plants than those which bear the pollen flowers. In these cases, Nature, in order to secure the continuance



of the species, despite the enormous waste involved by such a mode of distribution, fashions a far greater quantity. At the right period the stroller through Pine forests may now and again see or be enveloped in what appear to be clouds of mist or smoke when a passing breeze shakes the foliage and liberates the pollen of the flowers associated with it. Countless millions—numbers, indeed, are mocked at in such connections—must miss their goal for every one which attains it, and yet in every one the race potencies are complete, despite the minuteness of the chance afforded them for development. The human workman who was employed to make, say, a million delicate machines, knowing that only one would ever be used, would, we fear, be tempted to scamp a good many, but Nature “scamps” nothing, and perfection is her maxim throughout.—CHAS. T. DRUERY, F.L.S., V.M.H.

## Flowers of the Bridal.

In almost every country that has had a more or less civilised population so far as history carries us back, flowers have been associated with the bridal ceremony and bridal attire. Flowers of many kinds, and of varied colour, but, what seems natural, white flowers took the first place amongst many nations, because emblematic of maiden purity and innocence. Possibly the reason why the spring or early summer was a favourite time for marriage with our ancestors in the past, that just at that period wild flowers were plentiful, garden ones being then little cultivated. There seems no ground for a modern idea that May is an unlucky month to choose for the event. Nor is there anything more than fancy that a shower of rain is unlucky at a wedding, else there might be a reason against selecting April.

During recent times two flowers are prominent as bridal flowers—the Orange blossom and the Lily of the Valley. They are in contrast to each other, one is the conspicuous flower of a tree; its companion, partly hidden by leaves, comes from a plant of lowly growth. We put the Orange flower first, as especially associated with the bridal veil. Few, perhaps, are those in wedding parties who have any idea of its significance, but that we might expect. Some think it may be linked to the famous golden Apple of the gardens of the Hesperides, and there are some who maintain the Orange is only a substitute for the Citron, its ally the tree to which old legends belong referring to marriage.

We cannot be sure, but the Orange blossom is said to have been worn by Saracen brides, as it was supposed to bring happiness and a large family, the latter possibly not desirable to most people now. Then, after the Crusades, European brides took to wearing it sometimes, though its general adoption is quite a modern practice. Of course it follows that the fruit is lucky too in some way, and Oranges should form an item amongst the refreshment after the ceremony. We may observe, even if it is a little irrelevant, that William, Prince of Orange, and the Orangemen take name not from the fruit but from the Orange Lily, chosen as symbol. The colour has been so objectionable to some party men that they have even boycotted Carrots! To the Lily of the Valley, as a bridal flower, we cannot give a date, nor point to the country where it was originally used—perhaps in France or Italy. It was not only a sign of purity, for the plant, growing amidst thorns, was an emblem of the Virgin Mary; but popular belief gave it also the power of bestowing happiness upon the wearer. Other Lilies, in far remote centuries, had the repute of being sacred, or bringers of good fortune; the ancient Jews, indeed, are supposed to have worn at weddings a white Lily—*Lilium candidum*.

Amongst the Greeks it was common for the priests to place upon the bride's head a wreath of Lilies twined with corn—a symbol of happiness or prosperity. Farther yet we glance into the past, and in the magnificence of Egypt—the oldest nation—we find the Lotus figuring at ceremonies of a joyful nature, which was evidently one of the Lily tribe. Wreaths of a blue Hyacinth (species doubtful) have been worn in some countries both by the bride and her attendant maids, emblematic, it is thought, of fidelity.

But, singular to say, the same flower was associated with the dead, because, according to the myth, it sprung from the blood of Hyacinthus. Hence the poet's words:—

And so we ring a change upon these bells,  
For now of death, and now of love it tells.

That much renowned plant the Rosemary, of small esteem now, comparatively, had, like the Hyacinth, an important position both at funerals and weddings. Its use, however, has been discontinued nearly two centuries. Formerly the Rosemary not only bedecked the bride, but sprigs of the plant were frequently given as a token of affection by lovers to each other. Occasionally the old error crops up in print that the plant was named after the Virgin Mary. Likely enough, as a species rich in virtues, it may have been one of the numerous plants presumed to be under her guardianship, but it certainly took its name from the marine cliffs, where it was found growing freely wild. At weddings it was usual to add to the Rosemary's fragrance by dipping sprigs of it in perfumed water. One of the Shakespearian characters refers to the plant as a token of “remembrance,” which would make it significant at a time when new ties were being formed, old ones might be forgotten. Roger Hacket, in a curious wedding sermon of 1607, introduces the Rosemary, and remarks to the couple: “Let this flower, ensign of your wisdom, love, and loyalty, be carried, not only in your hands, but in your heads and hearts.”

Myrtle, so highly esteemed amongst the ancients, that a crown of it seemed a fitting reward for victors in certain games, is still regarded as a lucky plant. This belief prevails in some parts of England and in other countries. Thus, a Somersetshire maiden may be observed carefully attending to a Myrtle on her window-sill, since she thinks that if the plant languishes, it will be a bad omen for herself. Further, the Myrtle is credited with the power of producing and preserving love, hence its appropriateness at a wedding. Besides, it is a symbol of fertility, though singular to say, it has associations with sorrow and war. Three leaves taken from a bridal wreath of Myrtle and eaten were supposed to cure fever in Russia. Again, the Laurel, or Bay (*Laurus nobilis*), was welcomed at a wedding. The Romans called it the “Plant of the Good Angel;” its presence warded off the visits of evil spirits, so they thought. An emblem, too, of unchangeableness, it might well have its significance to bridegroom and bride. It is noticeable that the Rose, though a flower much admired, and sacred to Venus and the Graces, does not appear prominently amongst wedding decorations of the past, but chaplets of Roses were probably sometimes worn, when they could be made. Both in the East and West, Jessamine, when in bloom, has had its elegant stems twisted into the bridal wreath.

The Hawthorn, Whitethorn, or Maybush is a wedding shrub. By the ancient Greeks it was placed in the bride's garland, and branches of it were arranged upon the altar. Remnants of this practice may be seen in Greece of the present day. It would have been more poetical, but less true to life, if the shrub had no thorns, yet it might show forth the fact that marriage could not be all happiness in the future. Germans sometimes sent wreaths of Holly as wedding presents, the plant being a sign of cheerfulness, though the prickles would seem to be portentous, like those of the Hawthorn. Rods of Hazel have been carried in wedding processions, and at the close of the day these were burnt, and the nuts, when attainable, formed part of the feast. Our wild flower, Meadow-sweet, or Queen of the Meadow, had another name—Bride's Feathers—not because it was used as a decoration, but from its resemblance to the plumes brides wore.—J. R. S. C.

### New Cannas for 1903.

The undernamed Cannas are being sent out next spring by Maison Croizy et Cie., d'Hyères. They are fully described in “L'Horticulteur Nouvelle,” November 13. Orchid-flowered varieties: *Senateur Viger* and *Frederick Benary*. Crozy's race: *Leon-Varroud-Vial*, *Madame H. Coufourier*, *Madame Paul Cazeneuve*, *Antoine Roozen*, *Madame Noël Blanche*, *Dr. Albert Florence*, *Mrs. J. Wood*, *Bizarre*, *Madame Julie Aubert jeune*, *Madame André Charmet*, *Souvenir de Madame Ferdinand Cayeux*, *Nathalie Bourseul*, *Lady Trevor Lawrence*, *Madame Anne Boucod*, *Adrien Lefebvre*, *H. Burnaert*, and *Madame L. Clausse*.

## Societies.

## R.H.S. Scientific Committee, November 18th.

Present: Dr. M. T. Masters (in the chair); Messrs. Douglas, Odell, Saunders, Bowles, Worsdell, Holmes, Veitch, Baker, Druery, Hooper, and Worsley; Drs. Rendle and Cooke; Prof. Boulger; Revs. W. Wilks and G. Henslow, Hon. Sec.

Dr. M. C. Cooke, V.M.H.—Dr. Masters rose to offer in the name of the committee their hearty congratulations and goodwill to Dr. M. C. Cooke on having been presented with the society's medal. Dr. Cooke in reply observed, in thanking the committee, that he had no anticipation of the honour, as it was quite unexpected, since whatever he had done was always *con amore*.

*Stenoglottis longifolia*.—Mr. Odell brought spikes of this S. African Orchid with fasciated stems. The flowers are very small, pale rose, and spotted with crimson. He observed that the method of cultivation was similar to that of *Disas* in a cool house. Mr. Henslow remarked that *D. grandiflora*, "The Glory of Table Mountain," does not seed freely there, but propagates itself by stolons underground.

*Lily, fasciated*.—Mr. H. Simpson, Wandsworth, sent a fine specimen of *Lilium auratum* in this condition.

*Acorns, striped*.—Rev. M. C. H. Bird, of Brunstead Rectory, Stalham, Norwich, sent specimens of acorns peculiar to one tree in the above locality, a variety of the common Oak; they are very small and transversely striped. *Q. nigra*, of U.S., has similar striping, but the cause is unknown.

*Ruellia Cleistogamous*.—Mr. H. C. Davidson, Great Totham, Witham, Essex, called attention to this hitherto unknown peculiarity. The *Ruellias* referred to should have borne "large, blue, Bignonia-like flowers"; but the flowers borne were white, and so small that they could hardly be seen unless they were looked for. The envelope was early pushed off, like that of *Eschscholtzia*, but the pods swelled and produced seeds. One of the plants carrying the tiny white flowers and also ripened seed-pods, has since produced a single blue flower.

*Fertility of hybrids*.—Mr. Ch. C. Hurst sent the following communication:—"In the report of the last meeting of the above committee in *Journal of Horticulture*, 1902, ii., page 330, under the heading 'Vigour in Hybrids,' the following statement is made:—'It was observed that hybrids of *Cypripedium Fairrianum* will not cross.' According to the records this statement can hardly be accurate, because on sixteen distinct occasions hybrids of *C. Fairrianum* have produced offspring which have duly flowered. The following is a list of the crosses recorded (for detailed references see the forthcoming 'Orchid Stud Book.'): (1) *Paphiopedilum* × *vexillarium*, a hybrid between *P. barbatum* and *P. Fairrianum*, has been successfully crossed with *P. barbatum*, *P. bellatulum*, *P. hirsutissimum*, *P. Spicerianum*, *P. insigne*, *P. Stonei*, *P. × calophyllum*, *P. × Io*, and *P. × Williamsianum*. (2) *P. × Arthurianum*, a hybrid between *P. insigne* and *P. Fairrianum*, has been successfully crossed with *P. Argus*, *P. Spicerianum*, and *P. × Leeannum*. (3) *P. × Niobe*, a hybrid between *P. Spicerianum* and *P. Fairrianum*, has been successfully crossed with *P. insigne*, *P. Spicerianum*, *P. × orphanum* and *P. × javanico-superbiens*. We may therefore conclude that whatever degree of fertility may be peculiar to hybrids of *P. Fairrianum*, it cannot be said that they are absolutely sterile." Mr. Veitch quite corroborated Mr. Hurst's observations.

*Introduction of fungus pests*.—Dr. Cooke made the following observations on this subject:—"Apropos of Mr. Geo. Massee's statement at a recent meeting of the Scientific Committee that a fungus pest, a smut on grasses (*Cintractia*), was introduced into Britain with a species of *Bromus* from Patagonia. A similar instance has come to hand as to the introduction of the destructive Apple and Pear scab (*Fusicladium dendriticum*) into South Australia. This disease was apparently wholly unknown in that colony previous to 1877, when its introduction was attributed to an infected Seekel Pear tree which was imported from America. This is not improbable, and should serve as a warning to destroy, without reserve, any and all imported plants which give evidence of disease, and thoroughly disinfecting the soil."

*Ferns proliferous*.—Mr. Druery exhibited a pinna of *Athyrium Filix-femina* var. *plumosum*, Druery, showing a profusion of young plants developed from dorsal—i.e., soral, bulbils, which first appear as fleshy excrecences among the sporangia, most of which abort. As a rule, the bulbils only develop into minute excrecences, in which it is extremely difficult to maintain vitality during the winter, owing to the almost immediately subsequent decay of the deciduous fronds; hence only few plants have been raised by this means. This year, however, due probably to the moist season, the bulbils appeared much earlier than usual, and developed fronds which appear in the specimen very clearly on the upper surface. This proliferous trait is inherited from the progenitor, the Axminster *plumosum*.

*Apple, pyriform*.—Mrs. Bayldon of Dawlish sent an Apple resembling a Pear, from a large old tree in an old cottage garden. A similar fruit was thought to be a hybrid between an Apple and a Pear, but such has never been obtained.

*Black Hamburgh failing*.—Abortive flowering shoots were sent by Mr. G. H. Ricketts of Cranemoor Lodge, Christchurch, Hants, who observes that "every year the branches promise fairly well, but the Grapes fall, being good for nothing." Failure in root-action, probably waterlogging, was the general opinion of the committee. Mr. S. T.

Wright of Chiswick Gardens, to whom they were submitted, reports that, in his opinion, the Vine is "Canon Hall Muscat, a notoriously bad setter, and only succeeds well as a bearer in a few places. I would suggest rooting it out or grafting with a more reliable variety. Black Hamburgh never shows branches in the form of the specimen sent."

*Potatoes with tuberous shoots*.—Mr. C. Osman, Sutton, showed samples of Potatoes which had sent out shoots each of which bore numerous small Potatoes. The peculiarity had been figured by Dr. Lindley about the middle of the last century, but it is not so common as super-tuberation or secondary tubers issuing from the main one. This has been common in certain places this year, apparently due to prolonged degree of warm weather, which causes the Potatoes to start into growth, but instead of forming leafy shoots produces tubers. The variety known as The Garden is said to be particularly liable to it.

*Plant dyes*.—Dr. Plowright sent the following communication together with specimens of the dyes described:—

"*The common Larkspur*.—*Delphinium consolida*, as the older botanists used to call it, is a plant of considerable interest. The generic name *Delphinium*, for instance, is taken from Delphis, a dolphin, the similitude being in the flower buds before they expand. One of the aberrant members of the *Ranunculaceae*, it was in the olden times admitted to a place in the English Flora on doubtful grounds. 'The expressed juice of the petals, with the addition of a little alum, makes a good blue ink,' Withering tells us in his 'Botanical Arrangement' (14th edition). The quantity of juice which can be expressed from the petals is very little; but when they are crushed with a small quantity of water, and alum added, a green liquid is obtained. That it is possible to write with this is evident from the sheet of writing now exhibited; but that it merits the designation of ink is another matter. The green colour is not due to chlorophyll. It is capable of retaining its colour for more than a year, as is evident from the specimen exhibited; in point of fact, the sentence written with the 1901 ink is rather darker than that written with the 1902 ink. But this green fluid possesses another character of considerable optical interest, it is fluorescent. When viewed by reflected light it is green, as is the case when daylight is transmitted, not only ordinary daylight, but even direct sunlight. When, however, an artificial light is viewed through it, the fluid appears a red; the electric light, gas light, or even the flame of a wax vesta match has the same effect. A solution of chlorophyll in alcohol is also fluorescent, but in the reverse way, being green by transmitted, and reddish by reflected light. (1) Indigo-red dissolved in alcohol. This specimen is prepared from wood after the manner described by Prof. M. W. Beyerick, of Delft: 'To an infusion of fresh wood leaves, isatin and hydrochloric acid are added and the mixture boiled.' It assumes a dark, almost black colour, which is due to the deposition of innumerable acicular crystals of indigo-red, which are readily observable under the microscope. These crystals are insoluble in water, so that if the fluid be filtered, they remain on the filter as a black powder; this may be dissolved by alcohol. (2) A red colouring matter soluble in water and in alcohol. Obtained by treating dry wood seed with hot water and hydrochloric acid. This specimen is an alcoholic solution. This colouring matter is turned green by alkalis, whereby differing from indigo-red. (3) An alcoholic solution of the red colouring matter contained in the flower heads of *Hypericum perforatum*. This has been known for a very long time. Linnaeus speaks of the Scandinavians colouring the spirituous liquors by it. It is turned bright green by alkalis. (4) The male catkins of the black Poplar crushed with water and hydrochloric acid. (5) Petals of *Geranium sylvaticum* crushed with alum and water. These last two (5 and 6) are probably the so-called erythrophyll. (6) Petals of *Centaurea cyanus* crushed with alum and water. This is said by the older botanists to yield a "blue ink;" but the mixture thus obtained can hardly be called blue, but rather a dirty chocolate. It has, however, a red fluorescence by transmitted light."

*Cladium Mariscus*.—Specimens were received from Dr. Plowright, who writes:—"These distorted leaves were found upon plants growing on Ashwick Fen during the past season. Many plants were similarly affected." They had evidently received some check during growth.

*Helenium autumnale virescent, &c.*—Mr. Worsdell showed specimens of this not uncommon malformation. The bracts of the involucre were enlarged and subfoliaceous, while the corollas were virescent; but in lieu of the pistils was a minute capitulum surrounded by several brown anthers devoid of pollen. The virescent corollas of the ray florets were very much enlarged and trumpet-shaped, as in *Centaureas*, but both ray and disc florets had minute capitula in place of the pistil.

*Crimson Oak leaves*.—Mr. Wilks showed leaves which came from a single tree of a bright crimson colour on both sides. It was remarkable that no other trees bore such leaves in the neighbourhood.

## National Chrysanthemum, December 2nd, 3rd, and 4th.

The last of the long series of flower shows held in the Royal Aquarium, London, has now been recorded; and this latest exhibition of the National Chrysanthemum Society was indeed conspicuously meritorious. The classes were all well filled, one



having as many as twelve entries, and others eight, nine, and ten. The trade exhibits, too, were very interesting. Mr. W. Howe of Streatham was foremost for a group of Chrysanthemums and miscellaneous plants; and Mr. R. Foster of Nunhead came second. For a collection of plants, flowering, berried, and foliage, Mr. Howe was again leader. Mr. C. Blick had the only entry of six flowering Begonias. For the half-dozen decorative bush grown plants, Mr. W. Yeatman of Bethune Road, Stamford Hill, was awarded the lead, and fine plants they were. No one, unfortunately, opposed his chance.

Three varieties out of a large number of novelties shown received F.C.C.'s. These were Gen. Hutton, now well-known, shown by N. Davis; Beauty of Leigh (Davis), raised and shown by C. Penford, Leigh Park Gardens, Havant, one of the noblest and best Japs we have seen. The colour is a much richer yellow than Bessie Godfrey—a deep, yet soft glowing yellow. The petals are broad and spoon-shaped at the tips, these curling right round. The flowers staged were fully 6½ in deep and 7 in broad, being well built up. It was spoken of highly everywhere. Lastly, there was the deep golden incurved Miss E. Seward, shown by Mr. W. Seward, The Firs, Hanwell.

For the twenty-four Japs in eighteen varieties Mr. R. Kenyon was clearly leader with a heavy collection of fresh blooms for so late in the year. His best were Madame R. Cadbury, J. R. Upton, Charles Longley, Bessie Godfrey, and Guy Hamilton. The second place fell to Mr. H. Weeks, The Gardens, Thrumpton Hall, Derby, with flowers of very good colour. G. J. Warren was superb, Madame P. Radaelli (very pale) and Ethel Fitzroy were the best. Third out of ten came Mr. G. J. Hunt of Ashstead Park, Epsom, having a massive and deep bloom of Bessie Godfrey.

Again Mr. Kenyon led for the dozen distinct Japanese, and his manner of staging the flowers high up seems to us commendable, displaying the blooms to the best advantage. Madame Von Andre, very pale; Nellie Pockett, glossy white and strong; and Mrs. E. Thirkell, were worthy of special note. Mr. G. J. Hunt was a capital seconder, and third, Mr. H. Weeks of Thrumpton Hall, out of twelve entrants.

Class 5, for twelve incurved blooms, again found Mr. Higgs as the foremost contributor of these, and his flowers were equal to any at the November show. He staged a massive and beautiful bloom of Frank Hammond, and other good flowers were Ma Perfection, Bonnie Dundee (golden), Ialene, and Madame Lucie Faure. The competition was good, there being twelve sets. Second came Mr. G. J. Hunt, with rather rougher flowers than those of Mr. Higgs. His Bonnie Dundee was quite a ruddy hue, of good form. Mr. F. J. Clark, Wistow Hall, Leicester, was third.

The sixth class, for twenty-four trebles in vases, filled a large amount of space, and presented a very pleasing feature. Mr. R. C. Pulling, Monkham's Nurseries, Woodford Green, led off, and his Frank Hannaford particularly was splendid. The succeeding prize fell to Mr. G. J. Hunt, a strong competitor on this occasion. The third place was awarded to Mr. C. Payne, Sandhills, Betchworth, Surrey. The class filled three sides of a square round the west end fountain, there being six entrants. The first prize was £2.

Mr. R. C. Pulling was placed first for twelve bunches of Japs in six vars., these being exhibition sized flowers. Mr. H. Perkins of Greenlands made a very close second, and Mr. W. Howe, Park Hill, Streatham, third. Mr. W. Hammond of Woodside, Maidenhead, was foremost in class 8 for six bunches of Japanese varieties, and Mr. J. Sandford, Woodhouse, N. Finchley, second. Mr. W. Tipler came third. In class 11, for half a dozen bunches of decorative varieties, the winners were Mr. J. French, Ambleside, Wimbledon Park, with Cheveur d'Or, Cannell's Favourite, Lady Onslow, and Mrs. Filkins; second, Mr. G. W. Fortes, Regent House, Surbiton; and third, Mr. H. Humphrey, Roydon, Ware.

The table filled with single flowering Chrysanthemums was quite a feature. Mr. G. W. Forbes, Regent House, Surbiton, was first for six bunches, having the following varieties: Earlswood Beauty, Lady Sarah Wilson, Felis, Earlswood Glory, Lady R. Buller, and White Pearl. Mr. J. French was second, and Mr. Chas. Bentley, Cedar Court, Roehampton, third. Mr. Forbes again led for six large small-flowered singles, having Carrie Morgan, Lily Anderson, Little Pet, Miss Annie Holden, Souvenir de May Stevenson, and Mrs. D. B. Crane. Mr. J. Lock was second, and Mr. J. French third. For six vases of small-flowered pompons, Mr. W. C. Pagram's was the only entry, the varieties being Primrose League, Snowdrop, Perfection, and Petit Nid. Mr. W. G. Pruddon-Clark of York Road, Hitchin, led in class 20, and second, Mr. E. H. Palmer.

We are gratified to have to record a brisk competition for the vase of pompon Chrysanthemums, for which Mr. D. B. Crane was first, Miss C. B. Cole second, and Mr. J. Kirkwood, of Finchley, third. As shown by Mr. Crane and Miss Cole, these are very sweet little flowers. The latter used Snowdrop and Primrose League. In the prior class (13), for a vase of Chrysanthemums, Mr. A. Newell, of Fairlawn, Wimbledon Common, beat Mr. J. Lock, of Weybridge; and third, Mr. J. French, of

Wimbledon Park. There were eight vases. The decorative classes were well represented, and more satisfactory than usual. Miss C. B. Cole was first, Mr. J. French second, and Mr. A. Newell third for a hand basket of the flower.

The AMATEURS' DIVISION commenced at class 16, for a dozen Japs. Here Mr. H. Love, 1, Melville Terrace, Sandown, I.W., led with very fair flowers; second, Mr. W. Tipler, Hartwell Villa, Aylesbury; and third, Mr. F. Bush, Rose Hill, Totteridge. Mr. L. Gooch, of Frocester Lodge, South Norwood, with six fine Japs (class 17), beat Mr. M. Rayment, of North Ockendon, Romford; and third, Mr. T. L. Turk, Southwood House, Highgate. Here there were eight competitors.

Mr. A. R. Knight, of Ashford, was first in class 19, for six Japs, Mr. W. G. Prudder second, and Mr. M. Silsbury, Shanklin, I.W., third. Mr. T. L. Turk had the best vase of this flower; the second going to Mr. H. Pestell, and third Mr. C. H. Martin; Raymead, Hendon, out of seven. Another seven competitors were forward in class 21, the winners here being Mr. W. Gooding, Edenbridge, Kent; D. B. Crane, and F. G. Oliver, in this order.

#### Non-competitive Exhibits.

Amongst the non-competitive exhibitors were Lady Pigott (gardener, Mr. John Fleming), Wexham Park, Slough, who again staged model specimen plants of Begonia Gloire de Lorraine and Turnford Hall. The plants were 2½ ft high, and as broad, and massed with flowers (Gold Medal).

Messrs. W. Cutbush and Son, of Highgate, sent tree Carnations, including the white Mrs. S. J. Brooks, Mrs. Thos. Lawson, Gen. Maceo (very deep dark crimson), America, and Sir Hector Macdonald.

Messrs. H. Cannell and Sons, of Swanley, contributed their usual magnificent display, comprising Chrysanthemums on one side and Zonals on the other. The thread-petalled varieties and singles, for which Messrs. Cannell have a reputation, were considerably shown. Of the Japs, Gen. Hutton made a fine bank of showy flowers, and the new white Dorothy Pywell was also largely staged. Lady Marcus Samuel is a pretty lilac variety of very good form. Madame P. Radaelli was also included (Gold Medal).

Mr. H. J. Jones, Ryecroft, furnished half of the west end of the Aquarium and Mr. Norman Davis filled the other half. In Mr. Jones' collection there were really handsome flowers of the following novelties: Dorothy Pywell, Gen. Hutton, Mrs. E. Thirkell, Madame Paolo Radaelli, Mrs. F. Grimwade, also a seedling, deeper yellow than Bessie Godfrey, Geo. Lawrence, C. Jarvis, and Phyllis, a Japanese incurved. He also had Glory, an intense yellow decorative variety of great merit; and a number of fine incurved flowers (Large Gold Medal).

Mr. Davis was strong as usual in Mrs. Mease, G. J. Warren, and Madame Carnot. His group also contained some novelties, and fine decorative varieties, including Anemone-pompons, pompons, and singles. It was very finely staged (Large Gold Medal.)

Mr. W. J. Godfrey, of Exmouth, staged amongst others, Bessie Godfrey, Loveliness, Duke of Devonshire, Mrs. D. V. West, and The Bishop; whilst amongst decoratives he had Scarlet Prince, Magoya, and Golden Prince. Mr. Robert Foster, Nunhead, contributed a group, and obtained a Silver-gilt Medal; while Carnations in pots and cut blooms of the same in glasses were sent by Messrs. Geo. Boyes and Co., of Aylestone Nurseries, Leicester. Mr. Charles Blick (gardener to M. R. Smith, Esq., Warren House, Hayes), received a Gold Medal for a table filled with splendidly grown Lorraine Begonias.

Messrs. Wm. Clibran and Son, Altrincham, delighted visitors with a collection of single-flowered Chrysanthemums, including Mrs. F. R. Brown, white; Miss N. Charleton, reddish bronze; Mrs. E. Roberts, lilac-pink; Clibran's Yellow; Etoile de Feu; Lady Brooke, crimson; Lily, a large white; Verte Poitevine, very beautiful, greenish. Amongst their seedlings the following, under number, were very fine:—45, 62, 13, and 61.

Mr. Pattison exhibited his improved horse lawn shoes.

#### Leamington, Warwick, and District, Nov. 19th, 20th, and 21st.

This society held its annual show in the "Winter Hall" at Leamington on the above dates, and the high quality of the exhibits throughout elicited many high encomiums from the numerous horticulturists and visitors present on the opening day. Cut blooms, groups, fruit, decorated dinner-tables, wreaths and crosses were the great features of the exhibition.

In the matter of music, Leamington fully upheld its high reputation, as the Blue Hungarian Band played to delighted audiences during each day of the show. The arrangements in connection with the horticultural section were admirably managed by Mr. A. J. Nichols, the popular secretary, and Mr. R. Jones, assisted by a numerous committee. Unfortunately, the exhibition was not a financial success.

Cut Blooms.—In the class for twenty-four Japanese, distinct, Mr. A. Chandler, gardener to Arthur James, Esq., Coton House, Rugby, followed up his many successes of previous years by again securing the premier award. His flowers were, as usual, large,

deep, and well finished. Among the many fine blooms the following were conspicuous: Lord Ludlow, Ethel Fitzroy—both were similar in colour, orange and bronze, the former being a faultless flower with lovely drooping petals—Mafeking Hero, Florence Molyneux, Australie, Duchess of Sutherland (golden yellow), Sir H. Kitchener, Mrs. J. Bryant, Madame Cadbury, and Mrs. Bagnal Wilde. Mr. R. Jones, gardener to C. A. Smith-Ryland, Esq., Barford Hill, Warwick, was second with an even, well-arranged stand, W. R. Church, Mafeking Hero, Madame Carnot, and Mrs. T. Carrington being staged in fine form. The Leamington Nursery Company (Mr. Harper, manager) were a close third.

The silver cup offered by the Mayor of Leamington for twelve incurved and twelve Japanese was secured by Mr. C. Ritchings, West Malvern. The Japanese were weighty, but lacked finish. J. Upton was, however, grand, and decidedly the finest bloom in the stand; Mrs. Mease being also good. The incurved, although a heavy, even lot, were not conspicuous for their finish. Mr. Chandler secured the second position with a less weighty but well finished exhibit; the Japanese were especially good, but a few weak incurved flowers turned the verdict against him. Mr. Jones was third, his best flowers being Mrs. J. C. Neville, Vicar of Leatherhead, C. H. Curtis, W. Tunnington, and Duchess of Fife.

For a dozen incurved, Mr. Chandler was again to the fore; being followed by Mr. Jones and Mr. J. V. Macdonald in the order named. Mr. Chandler also won for twelve Japanese, being followed by Mr. Jones and Mr. J. Lloyd, gardener to Lord Willoughby de Broke, Compton Verney. The best six Japanese were staged by Mr. Chandler, who showed Lord Ludlow, Vivian Morel, and Madame Louis Remy in fine condition. Mr. Lloyd won in the class for the best arranged vase of Chrysanthemums cut with long stems. Wreaths, crosses, and bouquets made a beautiful display. Mr. C. Finch, Leamington, was first for the best bouquet and the best wreath, and Mrs. Greatley won for the best cross.

**PLANTS.**—The Leamington Nurserymen and Florists' Company won the chief awards for a group of Chrysanthemums and for a group of miscellaneous plants, in each case being followed by Mr. W. Vause. The exhibits in the latter class were particularly good, forming one of the chief attractions in the show, and they were also very close in point of merit. Special prizes were offered for decorated dinner-tables, and four excellent arrangements were staged, which gave the judges a good deal of difficulty in making their awards. They were as follows:—First, Mr. R. Greenfield, Leamington; second, Mr. Vause; third, Mr. E. M. Garlick.

**FRUIT.**—Both Grapes and Apples and Pears made an excellent display, and was more largely shown than usual. Mr. H. Liney, gardener to W. M. Low, Esq., Wellesbourne, was the proud winner of a silver cup offered for the best four bunches of Alicante Grapes, and he deserved the honour. Mr. W. Draper, gardener to R. C. Milne, Esq., Leamington, won for white Grapes with good Muscats; and Mr. J. Lancok, gardener to Captain Starley, was first for three bunches of black Grapes. Mr. Chandler won the prize offered by Messrs. Thomson, Clovenfords, for the best two bunches of Grapes, staging fine Muscats. Mr. R. Jones was first for three dishes of Pears, and for a like number of culinary Apples; and Mr. Chandler finished well by winning for three dishes of dessert Apples.

For a collection of fruit, first, Mr. E. Crumap, with beautiful samples of Royal Leamington Grapes, and many good dishes of Apples and Pears; second, Mr. J. Lloyd.

### Dundee Chrysanthemum, November 20th, 21st, and 22nd.

This exhibition took place in the Drill Hall on the 20th, 21st, and 22nd inst., and was a most satisfactory exhibition. Though not quite so large as in some recent years, quality was apparent in all classes.

**CUT FLOWERS.**—The leading class was for twelve vases Japanese, three blooms in each. First prize, of a gold medal and £5, was carried off by Mr. Beisant, with large, handsome, well-finished blooms. The additional week had suited Mr. Beisant, as his blooms were much better than those he showed at Edinburgh. The sorts were Sensation, Mrs. Barkley, Mrs. Geo. Mileham (very fine), Lord Kitchener, J. R. Upton (superb), Miss Elsie Fulton, W. R. Church, Calvat's Sun, Mrs. Greenfield, Marquise V. Venosta, Lord Ludlow, and Mons. Chenon de Leché. Mr. D. Nicol, Forgandenny, was a close second, his best blooms being Mrs. Mileham, Lord Ludlow, Madame Cadbury, and J. R. Upton.

For twenty-four blooms Japanese Mr. Beisant was again first with a most meritorious stand; Mr. Cumming, Grandtully Castle, a good second. Mr. Beisant was also first for eighteen blooms, and Mr. D. Nicol second. In the amateur classes Bailie Melville (president of the society) carried off the cup for twelve blooms, with an attractive and meritorious stand.

**POT PLANTS.**—These were splendidly shown, the best specimens being superior to either Edinburgh or London. For four pots Mr. Hendry, Taypark, gained first with very fine, well trained, and finely bloomed specimens; the second and third, by Messrs. Scott and Brown, were also good.

For table of cut flowers and plants two very attractive exhibits were made, which greatly enhanced the appearance of the hall. Mr. Fairweather, West Ferry, was awarded first, and Mr. Scott second. Among miscellaneous plants Begonia Gloire de Lorraine was a most attractive feature, the first prize four, from Mr. D. Saunders, being excellent specimens, full of bloom. The others were also good.

Bouquets were a good class. The first prize, one of nice yellow blooms, was most elegant, from Mr. Brown, Balcarin, Dundee. Decorative vases were also good. Fruit was a small show, but of good quality, Mr. Leslie, Pitcullen, Perth, gaining the premier prize. Vegetables were plentiful and good, a collection of eight kinds having three competitors. The first, from Mr. J. Kinnear, was most excellent.

There were a number of non-competitive exhibits of much merit, the most attractive feature of the show being a table of floral designs by Messrs. Laird and Sinclair, nurserymen, Dundee. Bouquets, harp, baskets, cross, wreath, &c., were elegantly executed, and were attractively arranged, though reminiscent of



Carnation, Miss F. Sims; reduced  $\frac{1}{2}$ .

The colour of this new self is rich maroon. It is of great substance, perfect petal, and of large size. It was shown at the Midland Carnation and Picotee Society on August 7, 1902, taking first prize in its class, and was also the premier bloom. It was awarded a certificate at the same time. Two flowers must be shown for a certificate, one dressed on a card, the other as cut from the plant. The above illustration shows a dressed bloom, somewhat reduced in size. Miss F. Sims is a cross between two seedlings raised by Mr. C. H. Herbert, grower to Messrs. Thomson and Sons, Sparkhill, Birmingham. This photo was taken four days after the flowers were cut, and they were at an exhibition two days.

a larger exhibit in Edinburgh the previous week. Messrs. Laird also exhibited a handsome collection of hardy shrubs.

Mr. R. Grossart, Dundee, exhibited a table of plants, varied and well grown; also some handsome bouquets, wreaths, &c.

Messrs. Storrie and Storrie, Dundee, had a table in which fruit and fruit trees formed the leading feature, showing the suitability of their Carse o' Gowrie nurseries for fruit culture.

Messrs. D. and W. Croll had an exhibit of cut Roses, which were remarkably fine for the late period of the season.

Messrs. Wells and Co., Earlswood, Surrey, sent an attractive exhibit of new Chrysanthemums, which proved most interesting to visitors, the rich crimson S. T. Wright being very prominent.



### Manchester, November 20th, 21st, and 22nd.

The North of England Orchid Society held its usual fortnightly show in conjunction with the Chrysanthemum Society's show. Mr. Weathers, from the Botanical Gardens, had arranged a huge group with effective skill, and was warmly to be commended, as was his assistant, Mr. Paul. One of the most conspicuous tables of fruit ever displayed was sent by Mr. N. F. Barnes, gardener to His Grace the Duke of Westminster, Eaton Hall. Apples, Pears, Grapes in dainty baskets, autumn foliage and flowers, correct of name, formed a fine object lesson to visitors, the gold medal award being justly earned.

Messrs. H. Cannell and Sons, from Swanley, Kent, had wonderful Zonal Pelargoniums, and also Chrysanthemums (silver medal). Messrs. W. Clibran and Son, Altrincham, had many new single seedling Chrysanthemums, Mrs. E. Roberts, Mrs. H. Herbert, Stella, &c., being grand. Two new incurveds, *Souvenir de Wm. Clibran*, a heavy and beautiful white, and *W. Biddle*, bronzy yellow, should be watched. Their *Celosias* are now too famed to describe here, and other plants made a handsome group (silver medal). Messrs. W. Wells and Co., Earlswood, showed singles and other novelties in their best style.

**Cut Blooms.**—For the Manchester Challenge Cup (value twenty-five guineas), with cash (£10) presented by John Wainwright, Esq. Mr. C. Crooks, gardener to the Dowager Lady Hindlip, Droitwich, proved victorious in winning the cup outright. Mrs. Mease, W. R. Church, M. Louis Remy, Mrs. Barkley, J. R. Upton, *Le Grand Dragon*, Lord Ludlow, Madame Herrewége, J. R. Thorneycroft, Madame Cadbury, Mons. Pancoucke, G. W. Palmer, *Calvat's Sun*, Madame P. Radaelli, *Australie*, Kimberley, Matthew Smith, G. J. Warren, Lord Salisbury, Nellie Pockett, *Graphic*, *Calvat's '99*, Madame Carnot, and Mrs. Coombes, with the incurveds *J. Agate*, *Ialene*, Madame Ferlat, Mrs. H. J. Jones, Duchess of Fife, C. H. Curtis, Mdle. Lucie Fanre, Nellie Stevens, Countess of Warwick, Hanwell Glory, F. Palmer, Nellie Southam, Mrs. C. Crooks, Colonel Keke-wich, Nellie Threlfall, Lady Isobel, Lord Alcester, *Ma Perfection*, Bonnie Dundee, Mrs. F. Judson, *Golden Empress*, Annie Hills, *Empress of India*, and Louisa Giles were the blooms in his collection. Mr. C. J. Salter, gardener to Mrs. T. B. Haywood, Woodhatch Lodge, Reigate, was a strong second, and Mr. J. Goodacre third. The class for thirty-six Japs, eighteen varieties, was a noble one, Mr. Hall, gardener to Lady Ashburton, Romsey, taking first honours. Mr. C. J. Salter was a grand second, and Mr. J. Stoney, gardener to F. H. Gossage, Esq., Camp Hill, Woolton, an admirable third. For eighteen Japs Mr. Crooks and Mr. Hall, with Mr. A. H. Hall, gardener to J. C. Waterhouse, Esq., Prestbury, were placed so. Mr. Stoney, for twelve, gave a fine account of himself; Mr. Hall second, and Mr. A. H. Hall third.

To Mr. G. Haigh, gardener to Sir W. Tate, Bart., Highfield, Woolton, the greatest credit is due for the superb twenty-four incurveds: each handsome and free from a taint of coarseness. The names ought to prove useful to beginners: *C. Bruant* (2), *Ialene* (2), *J. Agate*, C. H. Curtis (2), F. Palmer (2), *Topaze Orientale*, Lady Isobel (2), F. Molyneux (2), *Queen of England*, Mrs. Higgs, W. Tunnington, Madame Ferlat (2), F. Hammond, Mrs. H. J. Jones, Duchess of Fife, Hanwell Glory, and General Symonds. Mr. Crooks came a brilliant second, and Mr. Stoney third. Messrs. Haigh, A. H. Hall, and F. Ashworth won for twelve.

The class for miscellaneous blooms serves to keep up every section, and ought to be more liberally encouraged by societies generally. Mr. C. J. Salter here reaped a rich reward, *Anemones* and reflexed showing to much advantage; Mrs. W. W. Moulton and Miss M. A. Lightbourne second and third. The local classes were nicely filled.

**PLANTS.**—Such superbly grown specimens are only rarely met with, the position on the orchestral platform suiting to a nicety. J. Brown, Esq., won with nine and six, all up to exhibition standard. A. R. Kelly, Esq., for six pompons. Liberal were the prizes for groups of foliage plants and Chrysanthemums, the foreground boldly displayed with the former is a distinct advantage to the cramming so often met with.

Baskets and other floral work were up to usual high standard, with miscellaneous plants well to the fore. The winners were Messrs. Robinson, Derbyshire, Garner, Harker, Gorton, Walton, and Brown. Messrs. Dickson and Robinson, and Dickson, Brown, and Tait represented Manchester thoroughly; some plants of *Begonia Caledonia* in the former being particularly well grown. Manchester is noted for large undertakings, and Mr. Weathers is to be congratulated on trying to make horticulture take its share.—R. P. R.

At the above show specimen plants were numerous, and quite the best in point of quality seen this season, the later date of this show having been favourable to the full development of the blooms. Cut flowers were numerous and good, the compe-

tition being keen all through. In class 7, for thirty-six Japs, Mr. G. Hall, of Melchet Court, just succeeded in beating Mr. Salter for the premier award with a stand of even, full-sized blossoms. So good were they that we give their names as a guide for future use: Mrs. Mease (2), *Marquise V. Venosta* (2), *Le Grand Dragon* (2), T. Carrington (2), General Hutton (2), Madame Carnot (2), Madame Paolo Radaelli (2), *Australie* (2), Matthew Smith, Nellie Pockett (2), Charles Longley, Mrs. Barkley (2), Lord Ludlow, Lord Salisbury, Mrs. Hummell (2), Edwin Molyneux, *Calvat's Sun*, Madame Cadbury, Mrs. Greenfield, Madame Herrewége, W. R. Church, M. Louis Remy, *Calvat's '99*, Mrs. Lewis, Mrs. G. Mileham, and Mons. Chenon de Leché. Twelve Japanese distinct was a very strong class, so keen was the competition and good the blooms. Mr. Stoney was distinctly ahead with a level lot. Incurved varieties in classes set apart for this section were thoroughly well represented; no fewer than eight staged twenty-four in not less than twelve varieties.

An interesting class was that for thirty-six miscellaneous blooms, to include not less than six Japanese, six incurved and the same number of reflexed varieties. Five competed. John Boxall, T. F. Brock, Golden, Pink, and White Christine were noteworthy in the reflexed section. The *Anemone* flowered varieties were remarkably fine. So seldom nowadays do we see a stand of these that the names as staged will serve as a guide to future growers: R. P. Dunn, Mrs. Hugh Gardiner, *Owen's Perfection*, John Bunyan, W. W. Aston, *Halcyon*, Grand Alveole, *Souvenir de Norgoits*, and Delaware. Pompon plants were capitally represented, the plants being trained in pyramid form, well clothed with healthy foliage, and, as a rule, profusely covered with bloom.

### Manchester Orchid.

It was a great gain in every respect that the Manchester Orchid Society should hold their show in connection with the Chrysanthemum exhibition, visitors having a double treat in store.

Messrs. Cypher of Cheltenham made a very excellent display, for which they received the society's gold medal. Many plants of *Cypripedium Sanderæ* were there, handsome forms of *Cypripedium Leeanaum* and *C. giganteum*, and the Harefield Hall variety, *Dendrobium Phalaenopsis* in charming colours, and last, but by no means least, *Cypripedium Fascinator*, which so admirably partakes of both its parents, *hirsutissimum* and *Spicerianum*. Also the special prize by Mr. Gratrix. Another most deserving firm of Gold Medallists were Messrs. Charlesworth and Co., Bradford, whose *Oncidium tigrinum* and *Forbesi*, *Cypripedium Schröderæ*, a lovely cross between *ænanthum superbum* and *Fairrieanum*; and *Cypripedium Ernesti*, with splendid hybrids, to be heard of anon.

Messrs. John Cowan and Co., Gateacre, always reliable for a good show, gained the silver medal for a very choice lot of *Cypripedium Sanderæ*, *Elmirianum*, *Leeanaum giganteum*, and some specially fine forms of *Odontoglossum grande* being very pronounced.

To Messrs. Hugh Low went another silver medal with not a large collection, but how telling they were! *Cypripediums*, Harefield Hall var., *Leeanaum magnificum*, G. S. Ball's var., *insigne Sanderæ* M. Jules Hye, *Odontoglossum Ruckerianum*, and *Cattleya labiata Amesiana*, with white petals and pink lips, were specially good.

Thomas Statter, Esq., had as fine a collection as one could wish for; *Cypripediums*, of which *insigne Sanderæ* took the lead. Two lovely pieces of *Cypripedium triumphans* of the brightest colour, besides other novelties, a silver-gilt medal being none too good, S. Gratrix, Esq., had some very fine forms of *Leeanaum*, and received a F.C.C. for *Cypripedium Coronis*, very extra *Dayana x bellatulum*. A silver medal went to Mr. R. Ashworth for magnificent spotted forms of *Odontoglossums* and capital *Cypripediums*.

Mr. Jno. Robson can always be relied upon, and he quite kept up the Manchester reputation with a particularly varied lot, including many fine novelties. The Messrs. Holmes and Duckworth also kept things up to date, their contribution telling most distinctly against some of the larger ones. We missed W. Thompson, Esq., of Stone, but he can always be depended upon at other meetings.—R. P. R.

### Norfolk and Norwich, November 20th, 21st, and 22nd.

This is one of the oldest societies in the country, having been established in October, 1829, and it holds three exhibitions: a spring show in April; a Rose show in July, which includes plants, fruits, and vegetables; and a Chrysanthemum show in November. The latter was held, as usual, in St. Andrew's Hall, the fruit and vegetables finding places in a smaller hall. The society had considerably augmented the prizes offered for Chrysanthemums, and the amount of £145 was allotted to the classes. The Chrysanthem-

mum show is always held in the same week as the Norwich Fat Cattle Show, and, like the latter, it has become a county institution. The weather was fine on the opening day, and there was, as usual, a very large attendance.

The adoption of a vase class for six varieties of Japs, three specimen blooms of each, aroused much interest, and it proved a great success, the competition being numerous and keen. It also made a welcome break from the straight lines of specimen cut blooms on stands. The first prize fell to the lot of B. E. Fletcher, Esq., Mallingford Hall (Mr. G. Baker, gardener). His varieties were Madame Carnot, J. E. Clayton, N.C.S. Jubilee, &c. Lord de Ramsay, Haverland Hall (Mr. G. W. Mush, gardener), was second. His best blooms were Mr. A. Barrett, Nellie Pockett, and Chas. Davis. Lord Walsingham, Merton Hall (Mr. W. Riddell, gardener), was third. There was a class for three vases also, in which there was a good competition.

The class which created the greatest furore among the visitors was that for forty-eight Japs, in which the competition was very keen. The first prize fell to the lot of Sir Saville B. Crossley, Bart., M.P., Somerleyton Hall (Mr. F. Hanson, gardener). His most prominent blooms were Madame Gustave Henry, W. R. Church, Mrs. Mease, M. L. Remy, Matthew Smith, Sir H. Kitchen, Lady Roberts, and Miss Nellie Pockett. Second, W. R. Seago, Esq., Oulton Hall (Mr. G. H. Smart, gardener), with blooms only a little inferior to those from Mr. Hanson, and of much the same varieties. A nearly model bloom of W. R. Church in this collection was awarded the Silver Medal of the National Chrysanthemum Society as the premier Jap. Mafeking Hero, Lord Ludlow, Mrs. J. Lewis, Miss Nellie Pockett, Princess A. de Monaco, and Florence Molyneux were also very fine on this stand. The class for thirty-six Japs, in no less than twenty-four varieties, brought a good competition also, Mr. G. H. Mush taking the first prize with a collection which included excellent examples of Miss A. Byron, Madame G. Henry, Swanley Giant, W. R. Church, &c. S. Morris, Esq., Wretham Hall (Mr. G. Henly, gardener), was a good second. Among his blooms were well finished examples of Etoile du Nord, Simplicity, Madame G. Henry, &c. The best twenty-four Japs came from F. Martin, Esq., The Grange, Wroxham, an even and fresh lot. Conspicuous among them were W. R. Church, Madame Carnot, Matthew Smith, Madame Von Andre, &c. B. Cooke, Esq., Aylsham (Mr. F. Matthews, gardener), was a good second. He had striking blooms of Mrs. J. Ritson, Madame G. Henry, Lady E. Clarke, &c.

The incurved section is never very strongly represented at Norwich. The first prize, twenty-four blooms, was a well finished collection. The most striking blooms were Madame Ferlat, selected for the Silver Medal of the N.C.S. as the best incurved bloom in the show. Unfortunately, the names of the exhibitors in this class were overlooked, but there were excellent blooms of C. H. Curtis, President Bevan, Lady Isabel, Mrs. R. C. Pilkington, &c. The best six incurved of one variety was C. H. Curtis, from Mr. J. Baker, Marlingford Hall. The best six white Japs were those of Mrs. J. Lewis, from Mr. G. H. Smart. The best six of any other colour, but white, was found in Mrs. Mease, from H. A. Campbell, Esq., Lynford Hall (Mr. F. Tilbury, gardener).

Some very fine blooms were shown by amateurs not employing a gardener. The best twelve came from Mr. H. J. Barnaby, of Dereham, who had excellent blooms of Miss A. Byron, Mrs. Barkley, W. R. Church, and others, being finely developed.

Fruit and vegetables were generally good, and some very fine Grapes came from Lord Suffield, Gunton Park, Norwich (Mr. W. Allan, gardener). Mr. Allan exhibited in nine classes for fruit, and secured eight firsts and one second—a highly commendable performance. Mr. Allan was first with three bunches of well finished Alicante; the Hon. A. E. Fellowes, M.P., Honingham Hall (Mr. Sheddeck, gardener), came second, also with excellent examples. The best three bunches of Muscat of Alexandria came from Mr. F. Tilbury, Lynford Hall; and Mr. Fison (Mr. A. Lane, gardener) was second. Well ripened and coloured berries were seen in both cases. Mr. Allan came in first with three varieties of Grapes. He had in fine condition Gros Maroc, Lady Downes, and Alicante.

Apples, both dessert and culinary, were good. In the class for nine varieties of dessert, six fruits of each, Mr. G. H. Smart, Oulton Hall Gardens, took the first prize with well balanced fruits. There were extra good examples of Cox's Pomona, Ribston Pippin, and Blenheim Orange. Mr. G. Baker came second. He had very good fruit of Gascoyne's Scarlet, Cole's Seedling, Peasgood's Nonsuch, &c. With nine dishes of culinary Apples Capt. B. J. Petre, Westwick (Mr. G. Davidson, gardener), was placed first. His leading sorts were Warner's King, Peasgood's Nonesuch, Gascoyne's Scarlet Seedling, Bismarck, Lane's Prince Albert, &c.

Potatoes were largely shown, and generally of fine quality. Messrs. Sutton and Sons offered special prizes for six dishes. E. J. Corbett, Esq., Honing (Mr. T. Jones, gardener), was placed first. The leading sorts were Sutton's Perfection, Sutton's

Favourite, Sutton's Seedling, and Sutton's Reliance. There were many prizes for vegetables, Messrs. Sutton and Sons and Daniels Bros. offering special prizes in several classes.

Specimen Chrysanthemums and other plants were shown, and there were pretty arrangements in flowers; but the time at our disposal admitted of notice of only a few of the leading features in a great show. Miscellaneous collections were shown by Messrs. Daniels Bros.—fruit, flowers, vegetables, &c. Mr. R. Holmes, Norwich, had a large and well flowered collection of Mums, lifted from the open ground last October; and Hobbies, Limited (Mr. John Green, manager), Derham, a large and imposing collection of Chrysanthemums.

### Metropolitan Public Gardens Association.

**OPEN SPACES.**—At the monthly meeting of the Metropolitan Public Gardens Association, held at 83, Lancaster Gate, W., the Earl of Meath (chairman) presiding, progress was reported with regard to the laying out of the Southfields Recreation Ground, Wandsworth, and with schemes for the conversion of St. Mary's Churchyard, Whitechapel, and All Saints' Churchyard, Poplar, into public gardens. It was stated that the London County Council had decided to appeal against the recent decision of the Consistory Court, authorising the erection of buildings on Holy Trinity Churchyard, Stepney, which had been for many years in use as a public garden, being one of the earlier schemes carried out by the Association.

Applications were received from the Shoreditch and Stepney Borough Councils for the planting of trees in suitable thoroughfares in their respective districts, the latter body stating that they had no legal power to expend money in this desirable manner. It was resolved, should such be found to be the case, to take steps to secure an extension of the law in this respect. Numerous designs of drinking fountains in Paris, which the chairman had procured through the kindness of the British Ambassador, were inspected, and were considered a great improvement on the designs of fountains hitherto erected in London. Some of these were erected in Paris by the late Sir Richard Wallace.

It was decided to protest against any alienation of the house and adjacent ground at Golders Hill for the purposes of a convalescent institution, as being entirely contrary to the terms upon which the London County Council hold the estate for public use and enjoyment. It was also decided to point out the illegality of any part of a park at Sydenham being devoted as a site for a public library. It was agreed to give hearty support to Mr. E. N. Buxton's scheme for acquiring some 900 acres of land, formerly part of Hainault Forest, and to assist in any efforts made to raise the sum of £10,000, which the City Corporation had at its last meeting refused to grant. An interesting letter was read from Mr. Chance, of Edgbaston, stating that, acting upon suggestions made by the association, a scheme for the purchase, for public enjoyment, of Lightwood's Estate, sixteen acres, for £11,500, had been carried to a successful issue by voluntary effort. It was agreed to urge the formation of a local open space society for the Birmingham district.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.         | Direction of Wind. | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil,<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|---------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
|               |                    | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|               |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| 1902.         |                    |                         |           |           |           |             |                                       |                |                |                              |
| November.     |                    |                         |           |           |           |             |                                       |                |                |                              |
| Sunday ...23  | S.E.               | deg. 38.8               | deg. 38.4 | deg. 51.3 | deg. 34.5 | Ins. —      | deg. 40.4                             | deg. 44.4      | deg. 49.2      | deg. 25.0                    |
| Monday ...24  | S.S.E.             | 45.0                    | 44.7      | 51.5      | 33.0      | 0.27        | 40.5                                  | 44.5           | 49.0           | 24.1                         |
| Tuesday ...25 | S.S.E.             | 50.9                    | 48.9      | 52.1      | 44.8      | 0.08        | 43.3                                  | 45.9           | 48.8           | 35.5                         |
| Wed'sday 26   | E.S.E.             | 48.5                    | 47.2      | 50.1      | 47.3      | 0.02        | 45.3                                  | 45.6           | 48.5           | 45.3                         |
| Thursday 27   | N.E.               | 46.6                    | 44.9      | 50.2      | 46.0      | —           | 45.9                                  | 46.3           | 48.5           | 43.0                         |
| Friday ...28  | S.W.               | 49.7                    | 47.0      | 50.1      | 41.2      | 0.32        | 45.3                                  | 46.7           | 48.5           | 37.4                         |
| Saturday 29   | S.E.               | 48.1                    | 46.4      | 49.3      | 38.0      | 0.23        | 44.1                                  | 46.7           | 48.5           | 26.8                         |
| MEANS ...     |                    | 46.8                    | 45.4      | 50.7      | 40.7      | Total. 0.97 | 43.5                                  | 45.7           | 48.7           | 33.9                         |

A dull, dark, mild week, with rain on five days.



## Obituary.

Mr. Edward Brown, jun., of Southampton.

It is with much regret that we have to record the sudden death of Mr. Edward Brown, jun., eldest son of Mr. Edward Brown, J.P., of Above Bar and Hill Lane, Southampton, which occurred at his residence, Hughenden, New Alma Road, Southampton. Mr. Brown was a very enthusiastic and successful cultivator of the Chrysanthemum, as well as being a good all-round horticulturist. He was also without doubt one of the most bonâ-fide amateurs that exhibited; he did the whole of the work connected with his great hobby with his own hands, from striking the cuttings, through all the various stages until ready for exhibition. He kept in his note-book a strict record of all the cultural operations for future reference. This year, with only between 130 and 140 plants housed at one time, he was able to exhibit twelve blooms at the October Show of the N.C.S., seventy-eight at Southampton, twenty-four at Portsmouth, and twenty-four at Winchester, winning seven firsts, one second, and one third prizes. He was also awarded two silver medals at Southampton, being the most successful exhibitor both in the divisions open to gentlemen's gardeners and amateurs and open to amateurs only. This is a record that will probably never be attained by any other amateur. In fact, Mr. Brown was just one of those members who could be ill-spared by any society, and whose place it will be difficult to fill.—F.

## NATIONAL FRUIT GROWERS' FEDERATION.

We have received the following letter: "I beg to call your attention to the objects of this federation, which has been formed for the protection of the interests of fruit growers and market gardeners. You are probably aware from experience that the industry now labours under serious disadvantages as regards railway rates and want of suitable conveyances and quick transit for perishable goods, but perhaps few fully realise the unfair character of the competition to which British produce is exposed, and with which nothing but a powerful combination of a national character will be able to cope.

A provisional executive committee has been formed comprising representatives from the various fruit growing districts of England, and the names of these gentlemen should inspire confidence that the business of the federation will be efficiently carried out. In order to make the movement as successful as it should be, a large membership is necessary, and for this reason the subscription has been fixed at the low sum of 10s. It is earnestly hoped that you will not only join the federation yourself, but that you will also endeavour to make its existence and objects known to your friends. A copy of the rules will be sent on application. Cheques should be made payable to the secretary, and an official receipt will be forwarded for all subscriptions. Trusting to receive an early and favourable reply, and that I shall have the pleasure of enrolling you as a member.—A. T. MATTHEWS, Secretary, 28, Eaton Rise, Ealing, London, W."

We append a copy of the objects of the federation:—

"The objects of the federation are to create a permanent central organisation representative of the fruit growers and market gardeners of the United Kingdom, for the promotion of their common interests as a whole, while reserving perfect local liberty of action to the constituent members.

- (a) To prevent by every possible means the granting by railway companies of preferential rates and facilities for the carriage of foreign fruit and market garden produce.
- (b) To secure quicker means of transit and fair rates from railway companies, and consider complaints which are likely to be ignored by companies when made by individual members of the federation.
- (c) To prevent jams made of foreign fruit being sold by misdescription, misrepresentation, or implication, as being made of home-grown fruit, and to urge the distinct labelling of British fruit jams; and also to prevent the sale of fresh fruit, either wholesale or retail, by misdescription or misrepresentation.
- (d) To affiliate with any other kindred society or societies.
- (e) To promote, support, or oppose legislative or other measures affecting the aforesaid trade.
- (f) The doing of all such things as may be conducive to the prosperity of fruit growers and market gardeners, or incidental to the attainment of the above objects.
- (g) The collection and dissemination of statistical and other information relating to the fruit-growing industry."



## Fertile Workers.

The production of what is termed a fertile worker is due to the larvæ of any ordinary worker bee not being weaned at the proper time, the continuance of the extra nourishing food, called "royal jelly," causing a partial development of the ovaries. The ovaries in the ordinary worker, reared from a similar egg (the larvæ being weaned at the proper time), are very rudimentary, simply consisting of a few thread-like tubes, without a vestige of either eggs or germs. In consequence of these fertile workers being physically incapable of mating with the drones, they are only able to deposit eggs which will produce males. They are a great nuisance in an apiary, and at times cause considerable annoyance, taxing the bee-keeper's ingenuity and readiness of resource to rid himself of them. They generally appear in a colony which has been without a fertile queen for some time, and as this rapidly results in weak colonies, the condition of such a stock demands serious and prompt attention, as procrastination will only still further lessen the number of the inhabitants of the hive. Owing to the actions of the bees when in possession of a fertile worker being apparently similar to those when headed by a fertile queen, it will easily be understood that great difficulty is experienced in finding her. If a stock has been queenless for any lengthy period, it is always necessary to thoroughly examine it, and observe closely the actions of the bees. Many a valuable queen has been killed by attempting to re-queen such colonies without first ascertaining the exact condition of the colony. The fact that a fertile worker does not differ in outward appearance from her other sisters adds to the difficulty of detecting her, and unless the apiarist is fortunate enough to capture her in the act of depositing eggs, her discovery is practically impossible.

One of the reliable signs of a fertile worker being present in a hive is the irregular manner in which the eggs are laid, probably six or more in a cell, and also the manner in which the cells are capped over. Although the brood is in worker cells, the cappings are raised exactly like drone cells. The peculiarity regarding the number of eggs in a cell may also be found with a young prolific queen when she is cramped for room, or when the paucity of bees compels her to lay more than once in the cells which they can comfortably cover.

There is this notable difference, however, between the two methods of ovipositing—the young queens lay theirs compactly, not a cell overlooked, whereas the fertile worker, whose ovaries are only imperfectly filled, will occasionally miss a cell altogether, giving the eggs a scattered appearance. In getting rid of one, the knowledge that she has never left the hive to meet the drones for fertilisation is sometimes taken advantage of. The hive is removed bodily to a distance and an empty one put in its position; the bees are then thrown from the frames on the ground, and they immediately begin to return to the old location, while the fertile worker, being unable to find her way back, is lost. This is a simple, but not an infallible plan, as by some means she will occasionally find her way back to the old spot. Should this occur, and she still persists in laying, a plan which involves more trouble, but is more certain, is to open the hive on a fine day, shake all the bees off the bars into the hive, removing all the bars but those containing brood, and placing them on one side. Now replace the quilts above the fertile worker, bees, and brood, and place it in a different position, standing a fresh hive in the old spot, with the combs previously removed inside, and a bar of brood in all stages taken from another colony when practicable.

Those bees which accompanied the fertile worker having marked the old position, will very soon all return, and the bar of brood causes them to remain; otherwise, if left without either queen or brood, they would disperse among the other hives. The fertile worker by this plan is left with her brood, and probably a few workers and drones, to die off or to be destroyed by robbers. There is one point which must be emphasised, viz., the uselessness of

introducing virgin queens to a colony in possession of a fertile worker. Instead of getting rid of the pest by this means, it will be found that the virgin is generally dragged out at the entrance dead in a very short time; but this invariably occurs sooner or later.

The best plan, where it can be carried out, is to introduce a fertile queen on a bar of her own brood, and bees to the stock in a similar manner to uniting. The abnormal condition of things is soon manifest to the bees accompanying the fertile queen, and there is a rapid end to the fertile worker's ovipositing. If the stock should be weak, from neglect or any other cause, and it is not considered advisable to re-queen it, uniting should be resorted to.—E. E., Sandbach.

## Young Gardeners' Domain.

### Pentstemons.

These are amongst the few things that have been a success during this sunless summer. The dull, cool atmospheric conditions prevailing, resulting in free, vigorous growth, whilst rarely has there been that absolute purity of colour that has characterised the bloom this season. Hitherto our northern friends, having a monopoly of beneficent atmospheric conditions, have led the way wherever they have exhibited these charming flowers; but, judging by what has been presented to us by south-western growers (notably Messrs. I. House and Sons, Bristol), one feels inclined to venture the query "Stands Scotland where it did?" so far as the cultivation of the Pentstemon is concerned.

October is not a month in which one expects to find a brilliant display of colour in the garden, save, perhaps, amongst the early Mums and their more sombre brethren, the Michaelmas Daisies; but brilliant hardly adequately describes the view presented by the beds of Pentstemons when I visited Messrs. House's nurseries at Westbury-on-Trym during the early part of October. Many of the best spikes of bloom had been cut at the time of my visit for the shows, and from plants cut down thus early the first batch of cuttings were being taken. These are prepared in the same way as the typical bedding *Calceolaria*, but instead of their being inserted direct into soil in a cold frame, single pots (60's) are used; these are filled with light sandy soil, one cutting being inserted in the centre of each pot. These are then plunged in a cold frame, well watered, shaded, and kept close for about six weeks.

So soon as the cuttings are rooted, air is gradually admitted in order to ensure dwarf stocky plants; finally the lights are removed altogether on every available opportunity, and here the plants remain until planting out time in April. To grow Pentstemons really well a bed or border should be afforded them; if sheltered from the north and east so much the better, otherwise their stately blooms are liable to be damaged by the wind.

Planted in bold groups of from ten to fifteen plants in well-prepared stations along the front row of the shrubbery, they create a pleasing effect, but the choicer varieties are well deserving a good position, either in the mixed border, or, better still, in isolated beds.

A deeply dug and well enriched soil is essential to their well-being; cow manure, owing to its cool retentive nature, suits them admirably, whilst fairly firm planting, a slight mulch, together with a good supply of liquid manure during the growing period, materially assists in the development of fine blooms. They bloom from early August until "chill October," and nothing presents a more pleasing show than a good bed filled with these charming flowers, their light and graceful deportment annihilating the all-prevailing monotony that seems inseparable from the autumnal garden.

As with so many of the florists' flowers, there appears to be a desire to unwarrantably extend the number of varieties, but a preponderance of dull, purplish-coloured varieties creates an impression altogether unfavourable to this beautiful flower; a really fine exhibit recently set up at the Drill Hall was unfortunately marred by a too liberal admission of dark coloured varieties. Whilst one would not willingly eliminate the darker shades if growing a large collection where only a limited number can be grown, they should be discarded in favour of the brighter shades of red and pink.

Amongst the newer continental varieties brilliant colours are more prevalent, and from personal observation during a visit to a really magnificent collection I selected the following as the cream of the varieties: *Ninon de l'Enclos*, *President Carnot*, *Lady Brodie*, *Melodram*, *Frœlich*, *Talma*, *H. Spencer*, *Phryne*, *Negresse*, *Wm. Cuthbertson*, *Napoleon Key*, and *Port Royal*.—E. J. Love, E. Dereham, Norfolk.



### Fruit Forcing.

**VINES: EARLIEST FORCED PLANTED OUT.**—To have a supply of ripe Grapes in May the Vines must be started at the beginning of December, nothing favouring a good start more than a good bed of leaves and sweetened stable litter placed on the floor of the house and turned daily. The outside border should have the needful protection from cold rains and snow; a covering of leaves or bracken with litter on the top so as to throw off rain, will be considerably warmer than if exposed, and in this case covering with fermenting material may be dispensed with; but a covering of fresh leaves so as to raise a gentle heat is preferable, especially to those wholly outside. The inside border should be brought into a moist condition by applying water, and in the case of weakly Vines, liquid manure. Avoid making the soil sodden by needless waterings, as Vines require only moderate root moisture until they start into growth. Start with a night temperature of 50deg in severe weather, 55deg in mild weather, and 65deg by day, except the weather be severe, when 55deg will suffice, not exceeding those figures until growth commences. Maintain a genial atmosphere by syringing occasionally, but avoid excessive moisture, as it excites the emission of aerial roots from the rods. Depress the canes of young Vines to the horizontal line or below it, to ensure the regular breaking of the buds.

**LATE HOUSES.**—Take every precaution against damp. Leaky roofs are a prolific cause of Grapes decaying; a single drop of water getting into a bunch of Grapes is sufficient to spoil it. Though the decay may only be a berry, it soon spreads, and ruins the whole bunch, especially when the faulty berry is in the interior, so that it escapes detection until the mischief is done. Remove all leaves as they become mature, affording only sufficient fire heat to maintain a temperature of 40deg to 45deg, admitting air on all favourable occasions; but close the house in damp weather, seeking to secure a dry, cool, equal temperature. Muscat of Alexandria and Canon Hall should have a temperature of 50deg, a genial warmth in the pipes constantly, so as to prevent the deposition of moisture on the berries; but when the weather is cold and sharp allow the temperature to fall 5deg, being careful not to allow the temperature to be much accelerated by sun heat or natural warmth without a free circulation of air.—ST. ALBANS.

### Kitchen Garden.

**FORCING RHUBARB.**—A batch of roots of fair size, with numerous and stout crowns, should be placed in a structure where a temperature of 60deg can be maintained. Moisture and heat combined seem to suit Rhubarb, and enable it to push readily into growth. For early forcing, clumps lifted several weeks ago and exposed to the weather have received the salutary check to growth rendered necessary before a start into fresh growth can be made. The best structure for forcing Rhubarb is one where semi-darkness is ensured, together with a regular temperature and humidity. Other positions may also be found, such as under stages or in warm pits. Except in positions where the air is of a very drying character, it is not essential, as a rule, to surround the roots with soil, but apply moisture freely by giving applications of water whenever the roots appear to require it. Failing a suitable position inside a shed or glass house, Rhubarb may be successfully forced in a frame filled with manure and leaves. If a hotbed is formed with a frame on the top, linings of fresh material will have to be frequently applied in order to maintain the necessary temperature. The moisture in the soil and the humidity in the atmosphere will usually be sufficient until actual growth is in progress without applying water.

**FORCING SEAKALE.**—Strong Seakale roots only should be selected for forcing. Such roots will have bold crowns, and the produce is likely to be substantial. Pack the roots together in pots or boxes in good soil, which maintain moist. Exclude light entirely from the crowns so that growth will be well blanched. If there is convenience in a suitable structure for placing the roots together in a bed of soil on the floor, a large number of roots can be readily accommodated, but the supply must be regulated by the demand. Water the roots and soil as soon as arranged. The temperature should not be too high, so as to avoid drawing up the growths weakly; 55deg to 60deg is ample.

**VACANT GROUND.**—Early opportunities should be taken to deal with vacant plots of ground. Assuming that a general idea can be formed as to how the ground is to be cropped the following year, a definite method may be followed in the preparation of the soil. For any and every crop it is highly desirable to stir the soil deeply, trenching, in fact, if the ground has only hitherto been cultivated in a shallow manner. Wherever



tap-rooted vegetables are to be grown the ground may be cultivated to a generous depth, working in manure to the lower spits, but avoiding mixing it in the upper. For gross-feeding subjects work manure well throughout the whole of the soil. Stiff, clayey, unkindly, adhesive ground requires in the first place to be broken up roughly, so as to well expose as much surface as possible to the action of the weather, which has a beneficial effect upon it in breaking down the stubborn particles. In spring the ground is then easily pulverised, and rendered more serviceable for the cultivation of crops generally.

**ONIONS.**—Bulbs should be kept perfectly dry in the stores, as they are liable to push growth if kept in a humid atmosphere. They are also susceptible to frost, and will soon be rendered useless if caught in a damp condition. There should be just enough heat and ventilation to maintain the air dry, when the bulbs will then stand a low temperature with safety.

**BROCCOLI.**—Open weather is favourable to early Broccoli turning in, but it will soon be injured by frost; therefore break some of the leaves over the heads of those which have formed, or are in the process of doing so. Clear away the stems and leaves of those which have been cut, also yellow leaves from advancing crops.—E. D. S.



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**PURCHASING CHEMICAL MANURES (C. C.).**—The prices given in Cousins' Primer are wholesale, or per ton quantities, at which the manure dealers advertising in our columns will, no doubt, be pleased to supply the respective articles; or, as the prices vary from time to time, be glad to quote price on application. We cannot depart from our rule not to recommend dealers, unless under special circumstances and without prejudice. Of course, the articles cannot be supplied in small quantities at the same rates as large ones, and in some cases it is not possible to secure even these, as the article asked for may not be in request for commercial advantage, and it would not pay to prepare it in small amounts. Business is a very different thing from matters treated theoretically and not from a practical standpoint, a thing quite as important to compounders as to users, but seldom considered in practice by writers.

**ROSES IN POTS (Amateur).**—The most suitable compost for Roses in pots is turfy loam rather stiff, with a fourth of well-decayed manure and a sprinkling of bone dust equal to a twentieth of the loam. The temperature of the house should not exceed 45deg to 50deg by artificial means until they are fairly in growth, when it may be raised gradually to 55deg at night and 60deg to 65deg by day, with free ventilation. If you do not wish to force them early, they succeed admirably from January onwards in a greenhouse, assigning them light airy positions. After they commence growth liquid manure should be given at every alternate watering, and when in full growth it may be given whenever water is necessary, taking care not to apply it too strong. Until required for placing in heat, the plants should be kept in a cold pit or house with the pots plunged over the rims, and in severe weather afford a protection of mats in addition to the lights.

**CLIPPING CUPRESSUS LAWSONIANA HEDGES IN WINTER (G. G. H.).**—It is not good practice to cut the trees in the winter time, as the relatively slender growths are suddenly exposed to light and cold air, and when the weather becomes severe they are more or less killed or browned, and the hedge or screen has a very browned and disfigured appearance. The worst of it is the browning is very irregular, due to the degrees of hardiness of the plants as influenced by soil, its moisture or dryness, richness or poorness, exposed or sheltered position. It is best to cut the hedge into form in the spring during mild, moist weather, and trim in irregularities in July or August; thus the parts then exposed will be hardened up before winter, and the least danger of browning is provided for. Drought will not make the growths more than naturally brown, but rather stunt the growth, all the better for hedge plants, and the least liability to damage from severe frost is secured.

**EMPLOYMENT IN KEW GARDENS (T. B. W.).**—Young gardeners applying to the Director of the Royal Gardens, Kew, receive a form which has to be filled up and returned. The candidate, if he is suitable, is in due time installed at Kew. At least two years' practical gardening experience is required, and no candidate must be over twenty-five years of age. The form sent from Kew gives particulars, however.

**NURSERYMAN'S TENANCY (W. A. B.).**—You will, on vacating the premises, have a right to remove all your stock-in-trade, your trees, shrubs, and greenhouses; but see that the latter are only screwed on wooden frames, and not built or cemented into brick foundations, and that the boilers and hot water pipes are similarly detachable. We cannot say whether you have the "tenant right" of an agriculturist to compensation for enrichment of the soil. If so, you must have a valuation made before entering. The better plan is to specify all these things in a letter to the landlord. Take a copy of it, and then, if he gives you possession, he will be bound by the terms of the letter.

**SOWING A BANK (M. R. M.).**—In sowing a bank, we presume with grass seeds of different kinds, so as to form a green sward, there are not any small flowering perennials the seed of which can be sown with the seeds of the grasses so as to "create" a flowering bank, unless the different varieties of Clover are so regarded, such as white (*Trifolium repens*) and yellow (*T. minus*), with *Lotus corniculatus minor*. In shady places the best effect we have seen was formed by sowing the bank with grass seeds, and in this dotting bulbs of Winter Aconite, Snowdrops, Crocuses (when fairly open), and Daffodils, the bank being semi-wild, or the grass not cut until the foliage of the Daffodils were fairly died down. For a bank in very shaded spots there is no equal to the Dwarf Periwinkle (*Vinca minor*), of which there is a variegated form, also a white-flowered variety, and others with double white and double blue flowers. The Rose of Sharon (*Hypericum calycinum*) is an excellent dwarf evergreen for shaded places.

**MUSHROOM DEFORMED (J. R.).**—The Mushroom is simply in a monstrous deformed state, and is a form of the Horse Mushroom, *Agaricus arvensis*, evidently the variety *A. a. villaticus*, which attains a very large size, the pileus being sometimes 18in or more broad, and the stem 5in or more in height, and 2in or more in diameter. It is very much larger than any form of the cultivated Mushroom (*Agaricus campestris* var. *hortensis*), and sometimes occurs in Mushroom beds, both outdoor and in Mushroom houses, due no doubt to the spawn; but how the matter occurs is not known. The Mushroom is not only large, but strong smelling and not pleasant, as in the field and cultivated Mushroom. Besides, it is cracked, deformed, and affected by a minute parasitic fungus, which renders it practically useless. The Mushrooms will probably come in fair condition by keeping relatively dry and avoiding damping them overhead while in button state, or even larger. Probably the material of which the bed is made had something to do with the monstrous growth of the Mushrooms.

**MANURE FOR VINES (F. C. C.).**—The pump sewage, diluted, which you give the Vines in the growing season, would be bettered by adding 6lb of superphosphate and 1lb of sulphate of iron to each 100 gallons of the undiluted sewage, mixing well, and leaving for at least twelve hours before using. The Vines may be given a soaking of the sewage now if the soil is in a dry condition, and not more applied than suffices to make the soil evenly moist, as a wet condition at the roots when the Vines are dormant results in soddiness and sourness, and the roots suffer in consequence; shanking frequently results. Where the drainage is good, a liberal application of liquid manure to the border when the Vines are at rest is usually attended with considerable benefit, especially when the Vines have been heavily cropped, or anywise weakly in growth. Cow manure is best used on Vine and Peach borders as a mulch during the growing period, not applying more than an inch or two thickness, and renewing it from time to time, so as to maintain that depth. It is best in a rather lumpy state, and of most value where the soil is light or the border composed of open material. To prevent sourness a light dressing of air-slaked chalk lime may be given in autumn, after clearing off the remains of the mulching, about half a pound per square yard, pointing over the surface lightly, the mulching being given on that. A good artificial manure for Peaches is made by taking one and a half part each of sulphate of potash and sulphate of ammonia, and one part each of superphosphate of lime and steamed bonemeal, mixing well, and applying 4oz of the mixture per square yard in the autumn, pointing over lightly, or it may be applied in the spring, not later than when the buds of the trees commence swelling. As a later dressing a mixture of three parts dissolved bones, two parts nitrate of potash, and one part sulphate of lime may be used, applying 2oz to 4oz of the mixture per square yard, and scratching in lightly. This will probably not be needed until the stoning is near completed, and then applied will help to swell off the fruit.

**NAMES OF PLANTS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (B. F. T.).—1, *Begonia coccinea*; 2, *B. fuchsoides*; 3, *B. Verschaffelti*; 4, *B. manicata*; 5, *B. Rex* var. (A. C. T.).—*Tenarium fruticosum* and *Abies Menziesi*, the latter assuming your form of it, near the southern coast. (L. F.).—1, *Calanthe Veitchii*. (N.).—1, *Cymbidium Dayanum*; 2, *Luculia gratissima*; 3, *Cypripedium Leeanaum*; 4, *Dendrobium aureum*; 5, *Cymbidium giganteum*; 6, *Nerine flexuosa*. (T. J. R.).—*Iris stylosa*.

**NAMES OF FRUITS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (G. G. H.).—1, *Belle Dubois*; 2, *Lane's Prince Albert*; 3, *Bramley's Seedling*; 4, *Barchard's Seedling*; 5, *Round Winter Nonsuch*; 6, *Winter Greening*. (H. S.).—1, *Borsdörfer*; 2, *Annie Elizabeth*; 3, *Rambour Frane*. (H. W. Mackereth).—Not recognised; probably a local variety. (S. C. A. H.).—*Dutch Mignonne*. (A. T.).—1, *Peasgood's Nonsuch*; 2, *Emperor Alexander*.



## The Farmer's Poultry.

We are now fast approaching the shortest days—each afternoon finds the lamp lit earlier, and each morning the day breaks with greater reluctance. Not only are the days short, but they are sensibly dreary, cold, and more or less miserable. Mist which degenerates into fog, drizzle that culminates into heavy downpour; hard frost one morning, soaking wet the next, and so on. If there is a time that laying fowls are unprofitable it is now. Many are only just recovering from their season of moult, some are even now only just starting; eggs as a rule are scarce, and consequently dear. The outgoings for food are great, the incomings almost trivial. We are speaking of the masses: not of the classes. We will begin at home. We are cheerful and contented, and the reason is not far to seek—we have eggs.

On or about April 23 we hatched off some white and buff Leghorn chicks, and the first of these, a white, began to lay October 6. The others presently followed suit, and so we go on. Not only are our pullets laying, but some Plymouth Rocks who annoyed us sadly by persistent sitting in the summer, have come into profit now. They were wiser than we. "Why," they argued, "should we be laying when our eggs only make so little? Only average eighteen for 1s. We will rest now and moult early, and then see what we can do in the dull days, and when eggs are selling at seven and eight for 1s." These were self-respecting fowls, and a comfort to their owner.

A friend of ours—of whom some neighbours say she is poultry-mad, and whom others prefer to call poultry-wise—is selling now at this present moment hundreds of eggs per week at the pleasantly high prices. True, she devotes herself entirely to her fowls, and her situation and surroundings are exceptionally good. An isolated farmhouse with heaps of buildings, and surrounded by dry, sandy grass land. We say grass for courtesy, but really it is only rabbit warren, with Whin bushes all over, and full of little dells and sunny hillsides. This friend is guided by two great principles. Her first is not to hatch her chickens too early (that is, her future egg producers), and the second is to feed well and get them forward and healthy without superabundant fat. She has a pan in the oven or a pot on the fire for everlasting, and the great secret is strict personal attention; nothing is left to servants. We may modestly say the same thing ourselves, and we have found that we can combine efficiency with economy in food rations.

It is not the most lavish feeders who meet with the best success. We believe there are stones upon stones of good corn wasted constantly by poultry-keepers who, though they provide the food, quite neglect to supply any apparatus for its mastication. It is part of our regular routine to provide, by means of a hammer and broken crockery, a quantity of conveniently shaped "grit," to make or take the place of internal crop teeth. If poultry owners would give the matter a thought they would easily see that the natural supply of "grit" is soon exhausted in any fowl-run, however extensive (indeed, we might say on grass runs it does not exist), and

therefore it behoves us to make good the lack. We noticed only to-day (how it happened we cannot say) that a fowl or fowls had passed some grains of corn practically in exactly the same state as they had been when eaten. Now, that corn could have done the fowl no good at all. The supply of "grit" must be constant. Why? Because by constant friction the sharp edges get worn away, and the grit is useless. We believe that "experts" allow ten days as the limit of usefulness to a piece of sharp grit.

We have noticed ourselves when opening a fowl, how dull edged have been certain bits of what was very sharp china only a few days before. In some neighbourhoods flint does not exist. It is a splendid masticator, and the supply of best china (broken) sometimes falls rather short. There is no doubt at all that fowls pay for a little meaty food, and our successful poultry friend buys a good deal every week of the butcher in the form of plucks. She does not administer this raw, but well boiled, and then passed through a sausage machine. We are great believers in a liberal supply of vegetables—Carrots and Swedes, boiled or raw. If boiled, they may be mashed down with the paste which forms the morning's meal. Sometimes it is impossible to get much green food, or rather to get enough green food, during the winter months, so these roots eke out the scanty supply. A few well ripened Mangolds afford a pleasant amusement, and keep fowls from moping.

We have said we find the buff and the white Leghorns good layers, and if anyone could tell us a plan by which we could ensure hatching only pullets, we should be most thankful. Leghorn cockerels are poor things; they are too small in frame ever to be built up into good table birds, and if we could only distinguish them when quite young we would gladly sell every young cockerel at the week old.

We have just had a poultry lecturer in this village, and he assures us every well-grown cockerel costs 10s. before it is fit for table! We think he has a little overshot the mark; but there is no doubt of it that many young birds eat off their heads time and time again. The only way to make them pay is to hatch off early in the New Year, feed up quickly, and sell before or at Asparagus time, when there is no game, and only lamb, veal, and duckling to vary the monotony of the rich man's table.

To those of our readers who have incubators and patience, we strongly recommend the early hatching of selling chickens, and the April hatching of chickens intended as stock birds, i.e., layers in October and so forward. The reason the earlier hatches do not make good winter layers is because they begin too early, moult just when you want them most, and don't recover themselves till well into the New Year.

We have spoken about the incubator, which will soon be coming into active service. All our care, skill, and patience lavished upon it will be of little avail unless we use some judgment with respect to the eggs with which it is going to be filled. The birds which are now laying most freely are the pullets, but it is neither wise nor desirable to set their eggs. It is like breeding from immature stock; there will be constitutional delicacy, and winter hatched birds must be as robust as possible. Circumstances are all against them. Then again, it won't do to use the eggs from birds that have been laying continuously for any length of time; their eggs, too, will be lacking in vitality. Sitting and rearing a brood of chickens is a rest to a hen; she has probably been rather better fed, and she comes to her renewed laying well and strong.

Then as to her mate. A fine good cock must be selected, and in winter he will not require to be run with more than four or five hens. One little exhortation about the food. This harvest, alas! has been productive of much damaged grain—some of it so bad, in fact, as to be absolutely useless—yet we fear, and indeed we know, that a great deal of this black, wet, decaying stuff will be set before the poultry of the farm, and they will be expected on it to lay eggs, look well, and do well. This trash may fill them, but be no more beneficial than the rations of clay some savage nations take to quell the pangs of hunger.

We are not very sure about the value of spices and condiments. If given at all it should be with a sparing hand. There is so much food available for poultry that with properly diversified meals the fowl gets change and variety enough. We believe in rearing the strong, not coddling up the delicate. We all know feather beds among the better classes are things of the past; but that does not do away with the fact that there is still a good market for feathers, not only of the best



live goose, but of all other varieties. We are not quite sure whether the farmer, or rather perhaps his wife, takes sufficient account of her feathers' value. If a sheep's fleece is divided into many qualities, so, indeed, may a fowl's feathers if properly graded, well dried, and kept clean. They may represent quite a nice little asset. We wish we could see in every fowlhouse on the floor a layer of peat moss litter or dust, and we wish that it would occur to someone to constantly rake over the droppings, so as to fully amalgamate them with peat moss. At least once a week there should be a fresh sprinkling of the litter. The whole mass would be much easier and nicer to handle, and could be stored in bags or barrels till required. Next to pigeon manure that of hens is most valuable. If we should have soon, as is quite likely, a sharp frost, a little quantity of maize will aid the fowls in keeping up the heat of their bodies, and consequently their spirits.

### Work on the Home Farm.

Wheat has come up very well, and is looking promising. The mild autumn has been so favourable to rapid growth. A drying east wind has put the surface almost into rolling condition. We shall roll the young Wheat, if possible, as it may be months before we have another chance.

The August-sown Cabbage have not grown very quickly, but are quite big enough to transplant. The ground was prepared for their reception some time ago, manure ploughed in, &c., but pressure of other work has diverted attention. If the weather remains mild we shall put a couple of acres in, 15,000 plants per acre, and plant the remainder of the breadth in March. Where ground game is numerous, Cabbage is safer in the seed-bed during the winter; it is more easily protected. But autumn-planted Cabbage produces a much heavier weight of food.

All our regular horsemen having been away holiday-making, the labourers have worked the horses, and a good breadth of fallows has been turned over, but other work has been laid by. Amongst other things, a good deal of attention is required by the fences or hedges. Some of the roadside hedges had been trimmed almost to death for the sake of a neat appearance, and we have let some of them go for two years to strengthen; now they require a strong pruning. In all cases a fair and reasonable fence is required on the side of a public road, and must be provided; so we must keep that in view.

The fence must be taken off low, down to the roots on the side next the sun, i.e., south or east, leaving the brush on the other side about 2ft high or so. If there is a ditch next the road it may be filled with thorns, and a fair guard to the fence will be provided; but if there is no ditch we shall dig a trench and plant a beard of strong thorn branches to act as a protection on the road side. Some, nay, many, people would lay a hedge of this description; but apart from the expense in stakes, we do not like laying, because we think it has a weakening and decaying influence.

We said last week that we should have to wait for the cultivators to plough ley for Potatoes, but we see that a neighbour, who is in the same difficulty, is ploughing with chilled diggers, three horses in each. He says he is ploughing 10in deep, but we think 9in is the maximum depth, and that is quite heavy enough work for three horses. Well! we may be driven to trying the same plan, for we have the ploughs and horses; but we prefer not to kill our horses if we can help it, and shall give the steam cultivator people a little more law.

The milk supply is far from good; the mild autumn and a plethora of grass has tempted us to keep our cows out too late in the season; now we have them up on roots, hay, &c., but the milk flow has been lost and will not return.

Young calves for rearing are rather cheap, and it must be an extra good one to fetch 40s. Had milk been more plentiful we would have bought and reared calves freely, for calves reared from the present time would be just right to put on spring grass or seeds, and would be strong cattle to bring up to the yards next autumn. Those of similar type now in the covered yard have a most profitable appearance, and are really a pleasure to look at.

### A North American State Farm.

An interesting letter descriptive of the Minnesota State Agricultural Farm was recently published in "The Florists' Exchange." The northern line of this State borders the Dominion of Canada for four hundred miles, having on its east Lake Superior and the State of Wisconsin; Iowa on the south; and North and South Dakota on the west.

The State farm is conducted by the University of Minnesota, and is intended to furnish instruction to students in the manifold duties of advanced husbandry, and, second, to assist the

farmers by testing and introducing new varieties of grain and fruits. In connection with other experimental stations and the Department of Agriculture at Washington, D.C., it disseminates new varieties of merit, tests varieties adapted to other sections of the country with a view to proving their adaptability here, and by working along independent lines is constantly improving old varieties and introducing new ones considered worthy of general dissemination throughout the North-west. The farm consists of 260 acres of a rich, deep, heavy loam, which under generous cultivation produces enormous returns.

The work of testing seed varieties, under the supervision of Professor Hays, has been most fruitful of results, and many new varieties of Wheat and forage plants have been added to the list of seedsmen's desiderables by his efforts. Professor Green, in the nursery line, has been equally active, and by careful selection and experiments has added many new names to the list of desirable hardy fruits.

It has generally been supposed that good fruit could not be grown in this State, but the work of Professor Green has proved the fallacy of this supposition, and the many bearing trees of all varieties of fruit prove beyond a doubt that by planting proper sorts and giving them proper attention, Minnesota farmers can have as nice fruit as their more favoured brethren in the Eastern States. In Apples we might name Duchess of Oldenburg, Wealthy, Yellow Transparent, Gideon, Hibernian, Anisin, Peter, Lou, August, Peerless, Wolf River, October, Florence, and many other kinds which thrive here and produce good crops of fine fruit. A race of hardy Apples has been introduced from Russia which seem to resist the intense cold of the State with perfect impunity.

The introduction of the wild Crab stock (*Pyrus baccata*) from Russia, for grafting purposes, has overcome many of the perplexities attending the propagation of Apples in the North Star State. This stock is perfectly hardy wherever tried, of most vigorous growth, and well suited as a stock for grafting. *Pyrus malifolia* is another species from Russia highly spoken of at this station. A large number of seedling Apples is being tested here, the poorer ones being discarded from year to year, and the best propagated, and in time placed upon the market.

A careful record is kept of all budding, grafting, and planting, so that when a new variety is finally placed upon the market its pedigree can be traced back to its inception. In Plums and Cherries the same careful records are kept, and thus the good work goes on. The work not only embraces fruit trees of every description, but small fruits, ornamental trees, shrubs, evergreens, and so forth, all come in for their share of attention. The Rocky Mountain Cherry is found here in fruit, a medium sized oblong, black Cherry, with a fairly good flavour, a vigorous, bushy grower, and an early and abundant bearer. The Compass Cherry, with a medium size plum-like fruit, is also commended. The Buffalo berry, a native of the plains, is a valuable addition to our hardy ornamental shrubs.

Many varieties of Grapes are also perfectly hardy, and produce abundantly, while small fruits, such as Raspberries, Currants, Gooseberries, &c., are hardy and prolific. One plot of ground is devoted to sample hedges—Privet, Buckthorn, Caragana, Lilac, Viburnum, Spiræas, Barberry, &c., properly trimmed. The best all round decorative hedge for this latitude is the Buckthorn, *Rhamnus catharticus*, as it is perfectly hardy, a rapid, dense, and beautiful grower, holding its leaves late in autumn and putting them forth again in the early spring. As far as possible all trees, shrubs, and other subjects are labelled, so that visitors may see and know at a glance what is hardy and what is not.

### Farmers' Visit to Hungary.

We have received a book of 177 pages (5½in by 8½in), entitled "Agricultural Industry and Education in Hungary," this being an account of the visit of the Essex farmers' party to Hungary in May and June, 1902. It is compiled by Mr. T. S. Dymond from notes by members of the party and from official information supplied, with ninety-eight illustrations, all of them very clear and interesting. The work, we believe, is published from the County Technical Laboratories, Chelmsford, at the price of 2s. 6d. The arrangement of the matter is admirable, and the whole journey reads like a very interesting letter, and one cannot but be impressed by the care that the compiler has taken to gain every point of information that is likely to be of service to farmers in these Isles. Horse breeding being a chief industry in Hungary, much prominence is given to it in this book. Pigs, cattle, sheep, and poultry also receive due attention. The Hungarian Government did everything that lay in their power to make the journey both useful and pleasant, providing saloon trains for the party, and on more than one occasion invited them to State hospitality. Private Hungarian gentlemen whose farms were visited were also exceedingly courteous. Save for an accident to one of the party, owing to the bad roads, the visit was one of the most successful the Essex farmers have yet undertaken. We think highly of the volume, and commend the spirit that led to its production.

# CLIBRANS

## ORNAMENTAL TREES AND SHRUBS.

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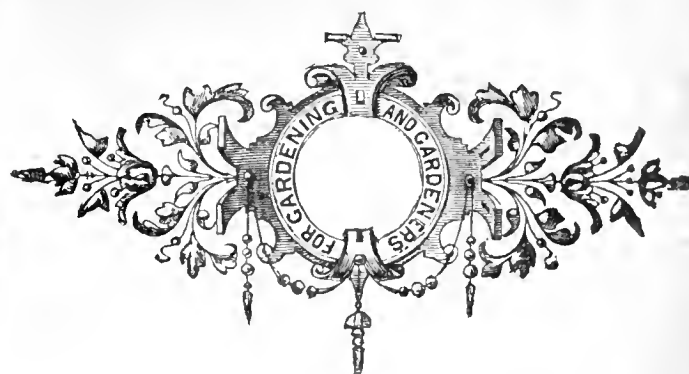
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## Journal of Horticulture.

THURSDAY, DECEMBER 11, 1902.

### Old-time Gardening.

(Continued from page 447.)



ONE might build theories on the essay "On Gardens" by Bacon; but it will be better to trust to more sober writers, from whom we gather that English gardening in the last year of Elizabeth was in a less splendid condition, though, on that account, no doubt on a more sure footing. All about London, for instance, were fields devoted to vegetable culture for the supply of the metropolis, others in which quantities of Roses, Clove Gilliflowers, and other plants were cultivated for medicinal purposes and for sale to the lieges for their private uses.

Among market growers who paid as much as £6 an acre for land, the question of manuring was assuming proportions that called for something further than that supplied by the lay-stalls of London streets, and so we find saltpetre, soot, rags, bones, and many other kinds of material being used as manure. The employment of vegetables among the working classes was becoming more and more common, and we gather from a later writer that at this period few, if any, cottages in the South of England were without gardens attached. In the western counties, Carrots and Turnips were used instead of bread, the value of Potatoes being as yet unrecognised. Farmers are said to have been further in the rear as regards gardening than any other class. The dwellers in towns and cities who could not afford gardens in the suburbs making up to some extent the want by cultivating flowers in boxes and pots. At this period the first really English work on fruit culture appeared, the production of a Yorkshire gentleman, and which shows a remarkable state of progress in the northern counties. An interesting fact is noted in this book, "The New Orchard," to

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.



the effect that gardeners formed a part of the establishment of country gentlemen. The gardener had charge of trees, as well as subjects more closely connected with his calling, and he was also bee-master. Whatever beyond what was required for the use of the proprietor and his family, it would appear, went to the gardener, not as a right, however, but as a mark of appreciation. Lawson's charming book depicts the orchard and garden of his day as a very delightful appendage to the house, the chief windows of which looked out on its flowers and fruits. "The Fruiterers' Secrets," a small pamphlet, shows how far advanced some, at least, of these old-time worthies were in the matter of gathering, preserving, and packing for transmission from one place to another the various fruits then in cultivation. It is the simple truth that in some things we know no more now than was published then. At this time a garden, no doubt a small one, was attached to every gentleman's house throughout the country; nurserymen were established where fruit trees, seeds, &c., could be purchased.

It was about this time that John Tradescant, then gardener to the Earl of Salisbury, made a tour of the Continent in order to purchase the best productions of these countries. He introduced many kinds of fruits and also flowers—the double Stock, for example. Tradescant was the first *gardener* who assumed the rôle of introducer, and it may be said with at least a degree of truth that he did much to separate the calling of the gardener from that of the physician, as the latter at an earlier date had taken the place of the lay monk.

I think it is not unlikely, too, that the florist pure and simple became part of the body politic at this period. It is clear from what Parkinson states, that the cultivation of certain flowers, which had nothing but their beauty to recommend them, or which were cultivated solely for their beauty, had already when he wrote become crystallised into a section, and several names have descended to posterity as cultivators of Carnations, Tulips, Auriculas, Anemones, and such-like. The florist of the seventeenth century had a whole-hearted contempt for persons who cultivated any other flowers than those he had marked as Flora's choicest; he occupied a niche of his own, and would allow it to be decorated after his own fashion only.

At the time we take leave of the old-time garden it contained almost all the vegetables we now cultivate, and a few more. Parsley was cultivated for its roots as well as its leaves. The use of Nettle tops, *Apium graveolens* or Smallache, Leeks, the leaves only, and Skirrits still continued. Violet flowers, Strawberry leaves, and some others used in pottage were beginning to cease to be used. Celery, "Sweet Parsley" it was called, was brought from Venice and cultivated in London. Potatoes were only a curiosity; but they had no Broccoli as yet, no Scarlet Runners, Kidney Beans taking their place, and were trained to stakes, and, as would appear, used ripe, more as Haricots, than as we use them now, green.

Among tender plants, we may be certain that the Orange had commenced its long career. It was at first planted against walls, and was protected by means of boards during the winter. Later this was supplemented by glowing charcoal introduced during frost. There were as yet no greenhouses. Melons, Musk Melons as they were called, were cultivated, the necessary heat being produced by heated horse manure and litter, or by means of Barley straw, which was said to keep its heat longer. There was no glass to place over the plants, but they were covered with mats and with oiled paper laid on cross sticks. Though we find these details, it is certain that they were a crop that was difficult to succeed with, and very few attempted their cultivation.

At this period the first mention occurs of syringing trees, which was effected by what is called a "Dutch Engine." It was carried by two men, and is said to have been effective for the purpose for which it was used. Shortly after this date we discover the ordinary watering-pot, with rose, which was made removeable as now; but it is doubtful if the water-pot in use at the beginning of the century was other than the old-fashioned one with a wide bottom pierced with holes, which narrowed to the top, where the orifice could be stopped with the thumb. It was filled by dipping the vessel into water, and when full the thumb was used to stop the upper hole; when in use the thumb was removed, and the water was sprinkled automatically over the plants to be watered. We learn, moreover, of the use of manure-water for the first time; it was applied in a very simple manner. The vessel containing the liquor was placed close to the plant to be fed, to which it was conveyed by means of a piece of rag, one end of which was soaked in the liquor and the other laid close to the base of the plant, a slow, but doubtless a sure process, as we read of large Strawberries being produced by this means. The early gardener had a wholesome

dread of manure-water or manure in any form "burning" his plants, hence, no doubt, the care bestowed in its application. These as a whole may seem poor advances, but they meant much in those days, and are really the precursors of the better means we have at hand now.—B.

[In the instalment preceding this *Staphylea colchica* should be *S. pinnata*.]

## Unsatisfactory Vines.

During recent years questions of economy have had to be seriously considered in connection with the management of hosts of gardens, and in some of them such considerations have induced cultivators to plant Vines in the natural soil where this has been fairly suitable, instead of incurring the expense of borders made in the orthodox way. Such cultivators have often been able to point to fine results achieved under this simple system of trenching the soil deeply, and adding bonemeal and horse droppings before planting. Well, the truth of the matter is that when Vines are grown to produce bunches of a suitable size for table, they will often thrive remarkably well for a time under what may be termed rough-and-ready kind of treatment, and when decadence begins some cultivators seem somewhat puzzled. There should, however, not be much mystery about the matter, as the fault invariably lies at the roots. Vines have a natural tendency to produce long rambling shoots, and the roots possess similar characteristics. Even when good borders have been made, unless they are constructed piecemeal, the roots quickly run through the soil and exhaust much of its fertility. Then the older portions of the roots decay, and the soil gets sour. Partially lifting the Vines and relaying the roots in fresh soil is the remedy in such cases.

In those instances in which proper borders have not been made, the roots follow their natural bent, and ramble in all directions, sometimes going down to a cold clay subsoil, at others pushing through poor and unsuitable materials nearer the surface. A good method of dealing with such ramblers is to take out a deep trench 6 or 8 ft from the point where the Vines were planted, cut off all roots found, place some concrete or rough rubble in the bottom of the trench, and build a wall to confine the roots within.

In those instances in which the borders were originally well made and the roots confined to the border, a somewhat different method of procedure should be practised. Take out a trench at the front, quite down to the drainage, then gradually work out the soil from between the roots, and clear it away up to within 2 or 3 ft of the Vine stems. As the work proceeds, the liberated roots can be tied to stakes and covered with mats to prevent them from getting very dry. It is always wise to have plenty of hands employed on work of this description, so as to get it done quickly. As soon as the intended amount of soil has been removed, re-arrange the drainage, and fill in the border with fresh soil, placing a layer of roots about 1 foot from the bottom, but bringing the bulk of them to within a foot of the surface.

Of course all damaged roots should be cut away, and the ends of the others also removed. When this is completed, a few inches of the surface soil of the hitherto undisturbed part of the border should be removed, and fresh soil added, the whole surface of the border being then dressed with a 6 in layer of sweet, fresh manure or half-decayed leaves.

Some cultivators in renovating Vines lift them completely out of the old soil and entirely remake the border. Under careful management, when the Vines are not very old, this often answers well; but it is not a practice which can be generally recommended, as I have seen instances in which it would have been far more satisfactory to plant young Vines than spend so much labour on old ones which were a year or two in recovering from the effect of such drastic measures.

To keep Vines successfully year after year it is necessary to be continually doing something to the roots, instead of neglecting them for years, and then doing too much at once. The following compost is one which I have used frequently in renovating Vine borders, with the best results. Good fibrous loam, eight parts; fresh horse droppings, one part; burnt refuse, one part; lime, half part; soot, half part; bonemeal, half part; turn the whole two or three times before use. In dealing with Vines which have long spurs it is an excellent plan to leave three or four eyes on each spur at pruning time, and select the strongest shoot from each at disbudding time. If a young rod is also taken up between each old one, the extra growth produced will do much to promote vigorous root action, and the old rods can be partially or entirely cut away the following year.—H. D.



**Cypripedium insigne, Harefield Hall variety.**

The number of new *Cypripediums* is almost as great now as the yearly number of new *Chrysanthemums*, and the enhanced beauty of the present-day forms in comparison with the type plants is striking. Some are remarkable for distinctness of colour, while many combine size with other attractive points. Coming within this latter category is the one we depict to-day. At the last two meetings of the Royal Horticultural Society, in the Drill Hall, large numbers of well-flowered plants of the Harefield Hall variety of *C. insigne* have been exhibited from many different cultivators. The variety possesses bold flowers of the size here given, and these are carried on stout footstalks. The most attractive organ is the dorsal sepal, it being quite 3 inches across the centre. The middle portion is pale green, heavily spotted with chocolate, and all round the outer margin there is a broad white edging. The pouch and petals are yellowish green with veins of darker green, and suffusions of brown. It is a most commendable and robust *Cypripedium*, and was certificated (F.C.C.) in December, 1898, when staged by E. Ashworth, Esq., of Harefield Hall, Wilmslow.

**Orchids at Highbury in November.**

When on a recent visit to the neighbourhood of the home of the illustrious Colonial Secretary, advantage was seized upon by the scribe to accept an invitation by Mr. John Mackay, the grower, to inspect the Orchids under his charge. The visitor found his courteous cicerone engaged in packing one or two flowers of a new hybrid, by name of *Brasso-Cattleya Marisæ* (*C. Warneri* × *B. Digbyana*), for transmission to the meeting of the Royal Horticultural Society on the following day. The bigener was raised at Highbury, and the blooms in question were the first produced, and appeared to possess distinctive merits, its large proportions being suffused with a delicate blush pink, and a bright, dense purple spot on the labellum, which latter partook of the *Digbyana* fringe, the disk having a greenish-yellow hue. Since the writer's previous visit several months ago, a remarkable improvement was noticed amongst the Orchids throughout, and in numerous cases the growths were of astonishing proportions. As there is almost always a large demand for cut Orchids at Highbury, it might occasion the visitor some surprise to find that probably a comparatively smaller complement of plants in flower at any one time than might be seen in collections of a similar extensive character. The show house, however, at the time of the writer's visit, was resplendent with a numerous variety of Orchids, principally *Cattleya labiata* in variety and *Lælio-Cattleyas*.

Among the latter a vigorous specimen of *Statteriana* was noted, with a profusion of blooms at least 8 inches across, its rosy-purple sepals and petals, and the lip of a rich crimson-purple colour, presenting, as it did, a striking object amongst its compeers. In close proximity was observed a thriving piece of *C. Mantini grandi-*

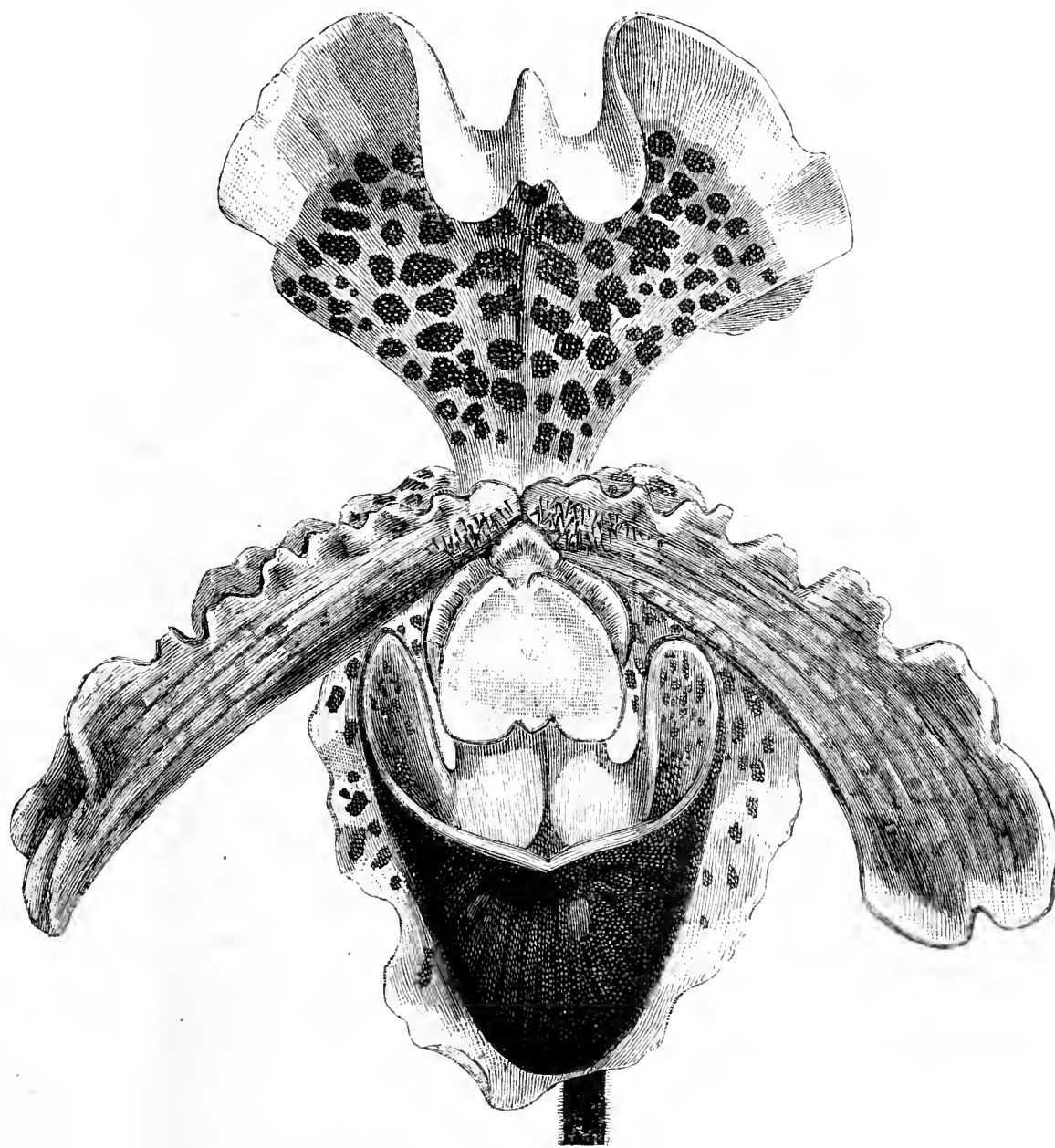
flora (*C. Bowringiana* × *C. Dowiana*); it is a great acquisition, with its deep purple lip, and petals and sepals of a much lighter shade.

Another equally attractive *Cattleya* was Miss Williams, raised from *Harrisoniæ* and *Gaskelliana*, with three spikes, carrying eighteen blooms collectively, produced from the current year's growth of pseudo-bulbs. The shape and colour savour more of the prior mentioned parent than the latter. A nice piece of *Sophro-Cattleya Chamberlainiana* var. *triumphans* was represented with four vigorous growths, carrying a complement of five flowers, each about 4in across.

Noteworthy, too, was a neat bit of *Lælio-Cattleya Decia* (*L.-C. Perrini* × *C. Dowiana aurea*) possessing a vigorous spike with several very showy flowers. An attractive object should be a flourishing piece of *C. labiata autumnalis*, with three robust spikes of yet unexpanded blooms. A similar remark may also apply to a fine specimen of *C. Bowringiana*, with seven or eight vigorous spikes of as yet unexpanded flowers. In the same category may be mentioned a healthy and vigorous plant of *Vanda cœrulea*, bearing eight or nine spikes expanded and expanding flowers. Very beautiful, too, was a nice specimen of the Indian *Crocus* (*Pleione lagenaria*), bearing numerous extremely interesting and pretty flowers. A piece of *Cattleya maxima* was distinguished by several fine flowers, with their purple veinings in the lip. Enhancing the display were several representatives of *Oncidium* *Forbesi* and *tigrinum splendens*, with their elongated spikes of large showy flowers. A plant of *O. ornithorhynchum* likewise lent lustre to the scene.

Of *Dendrobies*, *D. Phalanopsis highburyensis* was conspicuous by its richly hued flowers. *D. formosum Lowi* was noted, in company with a good piece of *Barkeria* (*Epidendrum*) *Lindleyana*. A very strong and healthy piece of *Angræcum sesquipedale* was remarked with two or three vigorous spikes of unexpanded blooms. In a separate structure a large batch of the almost indispensable *Lælia aneeps*, bearing hundreds of spikes of unexpanded embryo flowers.

The foregoing are a few of the more interesting and conspicuous kinds of Orchids noticed at the time indicated. Interesting and instructive, too, was Mr. Mackay's series of experiments with different media for potting purposes, and of which English leaf mould forms a favourite agent, especially for the production of vigorous young plants or others requiring a fillip to push them along. The benefit of this much discussed and popular becoming agent was well demonstrated by the fine roots of numerous young plants of terrestrial Orchids at Highbury. Otherwise peat and sphagnum continue to form the stable medium for established plants at Highbury. At the conclusion of an enjoyable, but all too brief a visit, and when the shades of eventide began to prevail, the scenic effect of the show house was much enhanced by the flood of electric light switched on at the doorway, a provision attached to the rest of the glass structures—at least, those of principal importance; and then, after reciprocal hearty adieus with the genial orchidist, I hastened to



**Cypripedium insigne, Harefield Hall variety.**

view another floral scene—that in the Birmingham Town Hall, in connection with the occasion of the grand festival given in honour of Mr. Chamberlain's intending visit to South Africa. The elaborately decorated galleries and the richly embellished dinner-tables, combined with the arrival of the expectant guests awaiting the presence of Mr. and Mrs. Chamberlain, afforded a *tout ensemble* of beauty and grandeur not readily erased from the memory of he who had to be content to participate, albeit in an ocular instead of a gastronomic demonstration.—W. G.



### The Week's Cultural Notes.

In many collections the blinds used for shading in summer are left up and used for covering the glass during sharp spells of frost. Covering is an excellent protection, a couple of thicknesses of canvas or tiffany keeping out a lot of frost and preventing the need of sharp firing, and this is the reason for leaving the blinds in position. But often in frosty weather the pulleys and ropes get tightly frozen after the blinds are let down, and, in consequence, the latter cannot be raised in the morning, but remain on the glass, keeping out the sun and light for hours.

This is the one reason for not recommending their use for winter as well as summer, for there is a vast difference in the feel of a house that has been covered all night and one where hard firing has been resorted to when you enter it in the morning. But the days are all too short now, and it will not do to shut out what little sun we get; consequently, some other method of covering has to be resorted to. On the roofs of small houses garden mats answer well, or a piece of the white garden netting nailed at each end to a roller, and laid on every night and rolled up in the morning.

The *Dendrobiums* are already starting their flower buds, the nodes on *D. Wardianum* being already prominent. Forcing is not usually necessary or advisable, but there are some species that may be hastened when required. *D. nobile*, for instance, may be placed in strong heat after its winter's rest, and if not kept too moist flowers will be produced in a month or thereabout. In the presence of strong heat and moisture the flower buds are conspicuously absent, and growth buds take their place.

*D. aureum* is also one of the first to show flower, and may often be seen at Christmas. I never keep this species very cool in winter, as I find that after the rest the pseudo-bulbs are apt to decay at the base. *D. crassinode*, again, has the same habit, the base of the stems being very slender in comparison with the swollen and thickened upper portion. All these deciduous species must be kept dry still at the roots. Well ripened plants have plenty of substance in them, and can easily keep going. Even should the bulbs shrivel a little no harm will be done, as they will soon freshen up when water is applied and the growing season again commences.—H. R. R.

### Orchid Hunting.

A gentleman, just returned from Colombia, where he has been Orchid hunting in the difficult mountain region, has given an interesting account of how the precious plants are obtained. He says that the mountains are most difficult to ascend. To reach an altitude of 9,000ft or 10,000ft is in itself a day's work. Here, as in plain and plateau, there is true forest growth—dense brushwood next Palms and Fern trees, and then, towering above these to 100ft or more, huge forest trees. A road is cut into the interior—often a long and tedious process—and eventually an encampment or central receiving depot is made. The party is divided into sections, and each has a particular area to explore—generally sufficient work to occupy a week. They are well fortified with axes and guns, and carry big baskets, made of dried leaves, in which to put the plants. The result of the search is largely a matter of luck. In a good district each man's findings will average from eighty to one hundred plants weekly. They are of all kinds, but largely *Odontoglossums* and *Cattleyas*, and are on the branches of the tallest trees. It is next to impossible to say from below whether they exist above the timber line. They cannot be seen, but the natives are said to possess a remarkable instinct in being able to say where the flower is likely to be found. They seem to recognise the type of tree mostly favoured by the plant, and it is seldom that their calculations are at fault. The plants are immediately stripped of their leaves and the bulbs dried. These are then fastened separately on cross-pieces of wood in large well-ventilated cases, and sent to the coast town for shipment. The bulbs, on arrival, look withered and unsightly, not unlike dried sticks without any value.

### Carnation Mrs. T. W. Lawson.

When this Carnation first came over from America there were some who said it had been boomed too much, and others who, on seeing the first flowers open, felt more than disappointed, as they were small and insignificant, and of a washy colour. This was only to be wondered at, considering the tremendous amount of orders sent to America when it was announced for distribution, consequently the rapid rate of propagation had a most serious effect on the constitution of the plants. Now that we have mastered its requirements, we can value it in its true light. Quite by itself in its lovely shade of colour, it has also splendid long stems, and lasts long when cut. The Liverpool florists' windows have certainly contained nothing more beautiful. It is a good grower, and if one only takes the precaution to shade from strong sunshine the colour is intense and attractive.—R. P. R.



### Result of Shows.

As was to be expected with an unfavourable summer and a late autumn, the early shows suffered somewhat in point of quality and quantity of exhibits. I predicted the midseason meetings and the later shows to get the best support and the finest exhibits, and so it turned out. Almost any show held during the second or third week of the show season was the better supplied with good material. No matter how skilful the cultivator, without favourable weather it is not possible to obtain desirable results in *Chrysanthemum* culture; still, on the other hand, knowledge, care, attention, and energy to push such attributes will do much to overcome what others may look upon as obstacles of an insuperable character. This is a season when all attention to minute items has stood growers in stead, and should be a lesson for those of less experience not to ignore all apparently to them too minute details in culture.

Speaking broadly, the season now brought to a close has not produced anything of a sensational character, either in exhibits or new varieties, yet, on the other hand, we have had average quality and certainly numbers, and not a few new exhibitors. Here and there shows have exceeded former years in point of quality of their exhibits, notably Sheffield and York, which, of course, to these societies is very encouraging. Speaking generally, there has been a much superior display of incurved blooms than was at one time expected. This section is not yet as near its death's door as some would have us believe. As is usually the case, there has been even a greater tendency to stage blooms of enormous size in preference to those of less dimensions but more in keeping with the ideal of an incurved flower.

At northern shows this has been more apparent than in the south of England. Cultivators there pay more attention to mere size than individual form. This, I think, has been an undisputed fact for the last twenty-five years; certainly my experience of shows in all parts of the United Kingdom gives no other opportunity but to express this opinion. Cultivators are not entirely to blame for this, what I call a defect, in placing size before quality. If the powers that be will admit these mongrel bred varieties into what should be a more select list, then exhibitors have the right to include such, although it is not always to their advantage to do so. Some exhibitors of incurved blooms do not pay sufficient attention to preparing them, not only on the show day, but previously; the consequence is many more "rough" blooms are to be seen. This is to be accounted for by the fact that less general interest is taken in this section than formerly.

Staging undressed blooms may coincide with the views of those who are not exhibitors, but if this section is to be retained in the exhibition building let us have them as near perfection as it is possible. The form of a globe is the ideal in an incurved flower to aim at.

The difficulty exhibitors find nowadays is to get young men to take an interest in preparing the blooms of incurved varieties, and thus we see so many immature specimens. If beginners would copy the standard of a Higgs, a Mease, a Hunt, a Crooks, a Neville, or a Goodacre, we should quickly find a general improvement in the blooms presented, and an increasing desire for their retention in the prize schedules, and a general wish for an extension of this section in other methods of production.

Japanese varieties have, of course, been the more numerous; the competition in many instances has been unusually severe. In some classes from ten to fifteen competitors have taken part, which is a strong proof of the popularity of this section. I have noticed a greater tendency throughout to select blooms more for their all-round quality than merely for size in diameter, greater depth of individual flowers with fulness in the centre, and a deeper regard for freshness and quality of petal has appeared to be the aim more of exhibitors—points of excellence that would commend themselves to all true lovers of an exhibition *Chrysanthemum*. The reflexed, semi-drooping style of flower which displays so much more of its surface colour, has been the aim. Surely this is a step in the right direction. What we require is flowers of a pronounced character, those that are neither distinctly incurved nor the opposite have not the same individual charm as those that are typical examples of reflexed or incurving varieties.

I notice a much greater tendency to manipulate the petals,

even of Japanese varieties, than formerly, with a view, of course, to display brilliancy of colouring, which is partly hidden in some varieties under various forms of culture. For instance, W. R. Church, Mrs. Barkley, Mrs. G. Mileham, Pride of Madford, and sundry others have been assiduously operated upon by the dexterous manipulator, and not always with disadvantage to himself in close competition. Those who are not exhibitors, and who have no connection with such beyond that of an admirer of Chrysanthemums, generally condemn the practice of "turning" the petals. Whether the habit of making the most of a flower by such a method is to continue remains to be seen, but certainly we get a much brighter-looking stand of blooms than formerly.

Better methods of staging the blooms upon the orthodox stands have been more general. Exhibitors appear to realise that a medium height of raising the blooms is more conducive to perfection than setting them either too high or too low. All round deeper inquiries are made for vase classes. Even those societies who have not yet adopted this principle of staging large Japanese blooms are inquiring how they look and where suitable vases are to be obtained, which is a sign of the times that they too must shortly adopt the method, even if it be but in a small way at the start. There is no doubt whatever but that in the near future every society, large or small, will insert one or more vase classes in their schedule, and rightly so.

The present has been a bad season for Anemone, reflexed, and pompon varieties. I have seen but one instance of a meritorious stand of the former—that at Manchester. Even the single-flowered varieties and what are known as decorative Japanese, like Source d'Or, Elaine, and many others, have been sparsely contributed. In the last two instances the season is accountable for much of their barrenness. In the former three sections, I fear, a loss of interest has much to do with the falling off in the number and quality of the exhibits. It does seem a little strange that those known as decorative kinds have been so limited when we never had a better display of what are known as "border" Chrysanthemums in the open. Even now many varieties are quite creditable to look upon after 8deg frost having passed over them.

Briefly summing up the result of the season, I cannot but say it has been quite satisfactory taking all things into consideration. There has been no jarring notes heard, and but few causes for dissatisfaction. On the whole, I regard it as a good season, weather taken into consideration.—E. MOLYNEUX.

#### The Height in Growth of Some Novelties.

Mr. G. Foster asks, on page 519, to what height Chrys. S. T. Wright will grow. When stopped and second crown are secured, the height from pot to flowers measured exactly 5ft with us. Mrs. C. J. Salter is only 5½ft this year, and last year it was 5ft. Mr. Foster says that the varieties Henry Barnes, T. Humphreys, and Mrs. C. J. Salter were catalogued as growing 5½ft, but certainly this was not by us. I should prefer Mr. Foster to call at Earlswood and see the collection, because it is not fair to measure such flowers as Mrs. T. W. Pockett, which Mr. Godfrey had at the Aquarium Show, for instance, by the side of those which Mr. Pulling had in his first prize vase, not six yards from them; or those which we have shown at the Royal Horticultural Society's shows. We have plants of Henry Barnes this year quite 10ft high. I have had Vicar of Leatherhead 11ft, Mafeking Hero 10ft, and Australie would go quite 12ft this year if left to natural second crown buds or terminals. Mr. Calvat's new Madame Waldeck-Rousseau was a foot taller than Australie. But, at the same time, Lord Alverstone was only 4ft, and Mr. Godfrey says this is the best Mum Mr. Pockett has ever raised. Mr. Foster could not have seen this. Lastly, let me add, in reference to "Viator's" notes on pages 518 and 519, that Durban's Pride is not an American variety at all (as per his report of the Exmouth collection), but one which I got from Australia and distributed last spring (not one of Mr. Pockett's varieties), but raised by Mr. Durban, of Tasmania.—W. WELLS, Earlswood, Surrey.

#### Culture of Japanese Varieties.

If we wish to grow the Japanese Chrysanthemums as bush plants, the general treatment will not differ from that accorded to incurved, Anemone, pompon, or reflexed and other kinds of Chrysanthemums; but, if we wish to produce large blooms, the procedure is somewhat different. Chrysanthemums as a class are cultivated in numerous ways—as bush plants, dwarf trained, small plants in "32" and "48" pots, cut-down plants, and others solely for large blooms. We will take first the plant that is required to produce large blooms fit for exhibiting. In order to start well, strong cuttings should be inserted by the end of November or early in December. They should be placed singly in small pots (thumbs), three or four in a larger pot, or in a bed prepared for them. An intermediate temperature should be maintained, and they may be kept quite close until they have rooted. Air should then be admitted, slightly at first, but more freely as the plants become stronger. When the cuttings are

well rooted, they should be potted into small and large "60" pots, and, if possible, they should then be put into a frame where they can be kept rather close for a few days, so that no check takes place.

After a start has been made—weather permitting—the amount of air should be gradually increased, and when well established the lights should be removed altogether on fine days. The next shift required will be from the large 60's (3in) to 32's (5in), and from the small 60's to 48's. The plants should be replaced in the frame, kept close until they have recovered from the shift, and then be given all the air possible. I do not consider it safe to place the plants outside until the middle of May. The position chosen for them should be as sunny as possible and, at the same time, be sheltered from cold winds. Plants removed from the protection of a frame and suddenly exposed to cold winds, suffer a great deal, and often lose many of their leaves.

All plants should now be staked, not finally, but with a stick sufficiently long to prevent them being broken off by the wind or by birds. During the month of June the plants will require their final potting. The pots generally used are 16in and 12in, or 8in and 10in, and the plants should be potted very firmly.—G. CARPENTER.

## Notes on Apples.

Mr. L. Castle told me some years since that experience would show that Apples vary much in all respects from climate and soil. He foretold correctly. I don't think I have missed reading one issue of the Journal since 1875. I have observed your practice is to be liberal to all of us with your space, yet it is not often that culturists relate results not concordant with accepted generalities. Few of us to-day care for unclassified facts. We assume they are facts; but life in a garden leads to what we call variations in the things we observe. Hence we are, and ever will be, empirical. How advisable, therefore, to collect all the "experiments" or "variations" we can. Everyone can do a little. I send you Apples Mère de Ménage, Flanders Pippin, and Belle de Pontoise. They are not of the "select" lists, but they are good. The trees and fruits have much in common. They grow freely, with shoots far apart, are fair fruiting, and the Apples of good size. Cut out cross branches, but let the others alone; same pruning suits such as Tower of Glamis and Brabant de Bellefleur. No Apple trees sooner show a lack of phosphates than these. Mère de Ménage is slow to fruit, earlier on Paradise. Along the east coast it does well; in the Midlands it cracks, casts, cankers, and commits all manner of wrongs. Flanders Pippin is not in fashion; its home is in Worcester and Hereford. It is preferable to Mère de Ménage, because it keeps longer, is nicer in shape, and the tree bears earlier. The Non-such stock does not thrive in many districts; it does here. Flanders Pippin grafted upon it is successful. Probably few have thus experimented, but a trial by the many is advisable, for of all cooked Apples none exceeds in digestibility with aged persons this and Betty Geeson. This may seem a petty remark; it is made because many private gardeners can increase the estimation with their employers when they supply them with fruit they like and can digest. Such men as Mr. W. Crump and Mr. W. Coleman knew this.

Belle de Pontoise has not met with the approval it deserves. It grows and fruits well here. Mr. Francis Rivers got it from France, and distributed it shortly before he made his cooking tests, which were related in the Journal, February 25, 1892. Cockle's Pippin is worthless here—no juice, no aroma. It does not improve with late keeping, as I expected it would do. To-day, December 1, I pulled from a bush tree, and ate, the American Apple Jonathan, which I had purposely left. It was luscious. I ate another in the store, but it was not so grateful to the palate. My inferences from Jonathan are that some Apples will improve if left on the tree until almost winter, that often it is fallacious to say the quality is not so good in the north as in the south. Ament this, I instance the Melon Apple. I have it on a wall, and as a low bush. The latter produces the best fruit freely; the former is a sad victim to scale. If you want a soft, melting flesh, rich with aroma, and a very digestible dessert fruit, then grow the Melon Apple. It is deficient in phloem in the fruit stalk. It has ripened this year, and Cox's Pomona has not. Whilst I am on eating Apples, which are excellent and can be well grown on and near a line drawn eastwards from Cheshire, I must not leave out James Grieve. I cannot write too much in its praise. It is especially useful in small gardens.

I am of opinion that when dessert Apples, which are digestible, soft fleshed, juicy, and rich in aromatic flavour, are wanted from July to January, the best are Irish Peach, Lady Sudeley, James Grieve, Melon, and Cox's Orange Pippin.—R. C. APPLETON, F.L.S., Beverley, East Yorks.



## Gadding and Gathering.

"HERE AWA', THERE AWA'."

The firm of Messrs. Robert Veitch and Son, of Exeter, Devon, command a wide respect and *clientele*, throughout the southern-most counties of England especially. A visit to their several nurseries reveals the fact that, though trees, shrubs, and hardy plants demand and receive the greater part of the firm's attention, yet all branches of the nursery trade is fostered, and the patron of Orchid collections, equally with the purchaser of ornamental stove and greenhouse plants, may discover the object of his quest at the chief department of this firm, in Exeter town. The nurseries on the New North Road are both beautifully and healthfully situated on rising ground, that gently slopes to the southern sun, and on the higher divisions of this ground are the glass houses. The occupants of these need not detain us until the outdoor department, with its trees and shrubs, have been discussed.

### Trees and Shrubs at Exeter.

If, after the many earnest pleadings that have unintermittently been made for the more extensive planting of choicer shrubs, and if, after the capable and lucid instructions that have voluminously poured from the gardening press, there is not a great renaissance soon to be recorded along this line, then British horticulture is erroneously eulogised. But the renaissance has undoubtedly begun; the keen observer has many proofs, and it will certainly expand. There is a delightful representation of the most beautiful and handsome shrubs in English nurseries waiting to be ordered; why, then, is a use not found for them?

The highly developed colour of the shrubs at Exeter could not be overlooked, and some beautifully feathered pyramidal bushes of *Cryptomeria elegans* had assumed quite a purple-chocolate hue. Conifers, more livid green than *Cupressus erecta viridis*, covering whole brakes, would be difficult to imagine or find. Messrs. R. Veitch and Son have nearly all of the newest Japanese shrubs, and, naturally, where the climate is so moderate even in the winter, the Bamboo element forms a somewhat conspicuous part. The beautiful *Phyllostachys flexuosa*, which is also one of the best in the Bamboo garden at Kew, was pointed to with pride, and this graceful representation of leaf and stem—one hardly cares to call Bamboos "shrubs"—is, we are told, becoming more largely planted each year. The robust growing *P. viridi-glaucens*, and which is at the same time one of the hardiest and least exacting in its requirements, together with *P. Henonis*, another rampant grower when established, require abundance of space in which to develop. They are beautiful subjects for a sheltered dell. Then there are *Phyllostachys aurea*, with slender, brownish-yellow stems, a most delightful shrub when it gets to 10ft or 12ft in height, and as much or more through. *P. nigra* has long, narrow leaves and black stems, and is also quite hardy. Some of the *Arundinarias* were also seen in a state of rude health, such as the noble *A. Simoni*, with plume-like drooping clusters of twiggy growths, and leaves attached on comparatively slender rod-like stems; *A. nitida*, a fine growing form; *A. japonica* (*Bambusa Metake*), the best known of all the hardy Bamboos, and one of the boldest and handsomest; with *Bambusa palmata*, and *B. tessellata*, both broad-leaved species, and dwarf in growth, are undoubtedly amongst the most commendable foliage subjects the planter could utilise. A Bamboo garden may become a feature of many more estates as time wears on. This section of outdoor vegetation is best grouped together in the manner of *Rhododendron* or Rose dells, though, in association with them, it is quite admissible to employ *Yuccas*, *Pampas Grass*, *Miscanthus*, and certain trailers or lowly-growing things—*Smilax rotundifolia*, Japanese golden reticulated *Honeysuckle*, *Gaultherias*, and *Funkias*.

*Nandina domestica* has been more frequently brought to notice through the pages of this Journal than of any of its contemporaries, and it is, therefore, unnecessary now to repeat the story of its graces. "Down south" it is perfectly hardy, and I have even seen it flourishing out of doors near the Haddingtonshire coast. Its chief merit is a light elegance of growth. At Exeter, Messrs. Veitch have some plants of it in pots, so that these can be planted at any season of the year. Then there are the different *Arbutus*, which, though not graceful by any means, are exceedingly interesting shrubs. On light, dry banks in the North Countree they seem to succeed, but they like comparative shelter and a cool soil, inclined to be fibrous or peaty. The red-flowered *Arbutus* (*A. Unedo rubra*) furnishes a splendid addition to the grounds in those parts, where it flowers abundantly. The red-brown bark of the Strawberry tree, which name is applied to *A. Unedo*, peels off in the same manner as that of the London Plane, showing a pretty greenish-yellow under-bark. Besides the two already mentioned, there are others worthy of notice, particularly *A. Andrachne*, *A. U. Croombi*, and *A. U. microphylla*.

*Carpenteria californica* is a shrub of recent introduction, having large snow-white single flowers, with a central mass of yellow stamens. The flowers are much like those of the Japanese

*Anemone*. It is a robust grower in the southern counties, having dark green leaves of moderate size. It is also hardy when given a little shelter on the cold, wind-swept east coast of Scotland. *Romneya Coulteri*, the Californian Poppy, has flowers not unlike the foregoing, but the habit of growth is entirely different. It is an erect plant, with wiry shoots and glaucous foliage, but is not so hardy as the *Carpenteria*. It requires a sheltered spot even in Devon, though at Kew this plant takes its chance with other subjects.

*Hypericum patulum* was figured in the *Journal of Horticulture* for October 31, 1901, page 405, and the comments there made in reference to this pretty dwarf shrub may still be in the minds of those interested. It was flowering in this Exeter nursery on November 15. The rosy-pink-fruited *Euonymus europæus* is indeed another invaluable shrub, and one regrets that so few gardeners seem to appreciate this native representative. In suitable quarters it attains to 20ft high, and being a native tree it is found flourishing almost everywhere. I am not sure that it fruits freely in any county, but at Exeter and various places in the Midlands I have noted its richly attractive display of bright pink fruits with their orange-coloured aril showing from within. This, the Common Spindle tree, is much used as a stock for grafting the choicer varieties. For its decorative qualities when in fruit it is well worth growing. *E. e. latifolius* has rich crimson fruits.

The hybrid *Escallonia exoniensis*, for which there is a growing demand, is peculiar to the Exmouth and Exeter neighbourhood, and though known by name to many, its merits have yet to be tried by the great majority of growers, and to those who are planting, or about to do so, it might be given consideration. Those fine shrubs, *E. macrantha*, with crimson flowers; *E. Philippiana*, usually smothered in white; and *E. rubra*, with deep red flowers, were noticed along with others. The *Magnolias* are too numerous to individualise, but attention may be called to the true Exmouth variety of *M. grandiflora*, which was pointed out to me, and has the reputation of being an improved form of the type. That finest of all spring flowering shrubs, *Magnolia stellata* (Halleana), with spotless white flowers of star-like shape, and which is a suitable dwarf shrub for forcing in pots or for beds on lawns, is "well done" at Robert Veitch's, and *M. Watsoni*, and *glauca*, and *Lennei*, and *Soulangeana nigra*, all amongst the very best, are included.

More might certainly be made of the various *Elæagnus*, particularly the variegated *pungens maculatus* and *reflexus variegatus*, both of which are shapely evergreen sorts. There is a goodly list to choose from, however, and most of them can be made to serve a useful purpose, being hardy. The *Desfontainia*, mentioned in the Killerton notes as having flowered resplendently there, was seen to equal advantage here; whilst the *Embothrium*, or Fire Bush, of course was quite at home.

In dealing with the whole array of trees and shrubs (which amount to hundreds of genera and thousands of species and varieties) in a nursery such as this, the constant difficulty arises in what to name and what to omit. It has been already stated that most of the choicest introductions of later years are grown by the firm, and there are, too, plentiful quantities of many shrubs and trees which nurserymen further north cannot undertake to cultivate on anything but a very minor scale on account of possible loss by frost; and the trees and shrubs most generally in demand find the congenial Devonshire climate very much to their liking, and they thus assume a well developed character and rich colour. The ornamental *Coniferæ* were especially satisfactory on the latter point, and of them one may name *Thuyopsis dolabrata*, which forms straight leader shoots, and grows many feet high; *Cupressus Lawsoniana aurea*, in beautiful pyramids, 10ft high; *Cupressus macrocarpa*, seen here in such beauty as is not equalled elsewhere; *Pinus insignis*, densely clothed with rich green slender needles; while *Picea Pinsapo*, *Pinus Laricio*, *Abies cærulea*, *Thuia Lobbi*, *Taxodium distichum* (superb young trees), *Retinospora pisifera aurea*, *Wellingtonia gigantea*, *Retinospora Lobbi gigantea*, *Taxus argentea variegatus*, and *Juniperus chinensis aurea*, as typical and well-known *Conifers*, were each represented in large brakes, and every subject perfect in contour, development, vigour, and shade of colour.

One feels compelled to name certain flowering subjects in addition to those already named whose unusual luxuriance could not pass the eyes of anyone interested in this class of nursery stock. Among these are the golden-amber bushes of *Diploppus chrysophyllus*, less known perhaps under the name of *Cassinia fulvida*. This is a dwarf, close-growing pretty shrub, of much value. *Choisya ternata*, too, with its white clustered flowers and glossy green leaves, is worth its place everywhere. The same may be said for the Spanish Broom (*Spartium junceum*) and for *Genista aetnensis*, *præcox*, *hispanica*, and *capitata*; while the many fine *Cerasus*, *Cratægi*, *Cotoneasters*, and *Ceanoths* include a host of indisputably beautiful subjects. The fruit and Rose nursery is situated at Howell Road, but both the fruit trees and the Roses, in the middle of November, were assuming their winter condition of leaflessness.—WANDERING WILLIE.

## Some Non-competitive Pears.

Names of Pears are by many culled from the exhibition tables during the autumn months for the purpose of adding additional kinds to existing stock, or to form a new collection; a most commendable action, be it said, where fruit is desired for the brief period of the winter which such a source would furnish. Usually, though not invariably, fruit exhibited are ripe, or on the verge of ripeness, when exhibited; not that this should be, though it is often made, a favourable consideration in the awarding of prizes. There are some Pears—indeed, a good many—that never find their way into an exhibition, simply because their size, appearance, or season renders them ineligible. To say there are far too many Pears in cultivation does not require emphasis, for out of a large selection there are very few which combine a season outside the months of October and November, and for ordinary home consumption it does not require any stretch of imagination to consider how few are actually required for those two months. With Pears, however, there is such a vein of uncertainty; a variety good, it may be extra good, in one season may be almost worthless another. So many are impatient in waiting for their turn, and when there are a fairly large assortment, all ready to be dealt with at the same time, there is sure to be losses more or less severe.

Doyenné Boismond is a Pear somewhat similar in colour, though more round in shape and smaller in size. This has a very good quality, juicy, rich, and melting, and what is so commendable is that, like the first-named, it keeps soundly until some others are gone. For this reason it is deserving of a space for two trees, where some better known ones will afford sufficient for their time from one tree. It is a French Pear that does not find a place in Dr. Hogg's fifth edition of the "Fruit Manual." It may be truly said there are many less deserving, though much better known.

Althorp Crassanne is a Pear I have a good opinion of for three reasons; namely, regularity of crop on bush-grown trees, most distinct flavour, and accommodation in its keeping powers. This is a variety without any external beauty, pale green, without even a freckle or sunny flush. Its rich, perfumed flavour, extreme juiciness, buttery texture, and white flesh combine all that one can desire in a Pear. None among our early winter sorts remain so long in a sound state, a quality certainly deserving of recognition.

Seckle, one of the smallest of Pears, combines even greater depth of flavour than Marie Louise, and is, in this respect, really excellent. It is a very tempting Pear with birds, especially

tomtits. This is so marked that, unless protected, but very few fruits remain sound enough to store. It is fairly free in fruit as a bush tree, and on account of its high flavour one tree ought to be grown where space allows.

Passe Colmar is a small sized, nicely-flavoured Pear that extends beyond the span of October and November, strictly Pear months; that also crop very well as an open bush. Its many synonyms would point in some degree to a merit above the average of Pears. On a wall, no doubt, the fruit would be larger and more attractive, though quality may be no better.

Olivier de Serres is another good variety, not of the competitive order, for no other reason than its lack of size. In quality it ranks far before Pitmaston Duchess, so much favoured for show purposes, and will keep well. Some find it last into February; but it has not favoured me into quite so late a period of the winter.

President Barabé is one that has acquired fame within later years, not because of its large size, for this certainly is an absent attribute, but rather for its keeping and cropping qualities, which are the more desirable. It is most distinct in character, especially its large, open eye and extended segments. In this respect it differs from almost every other known Pear.

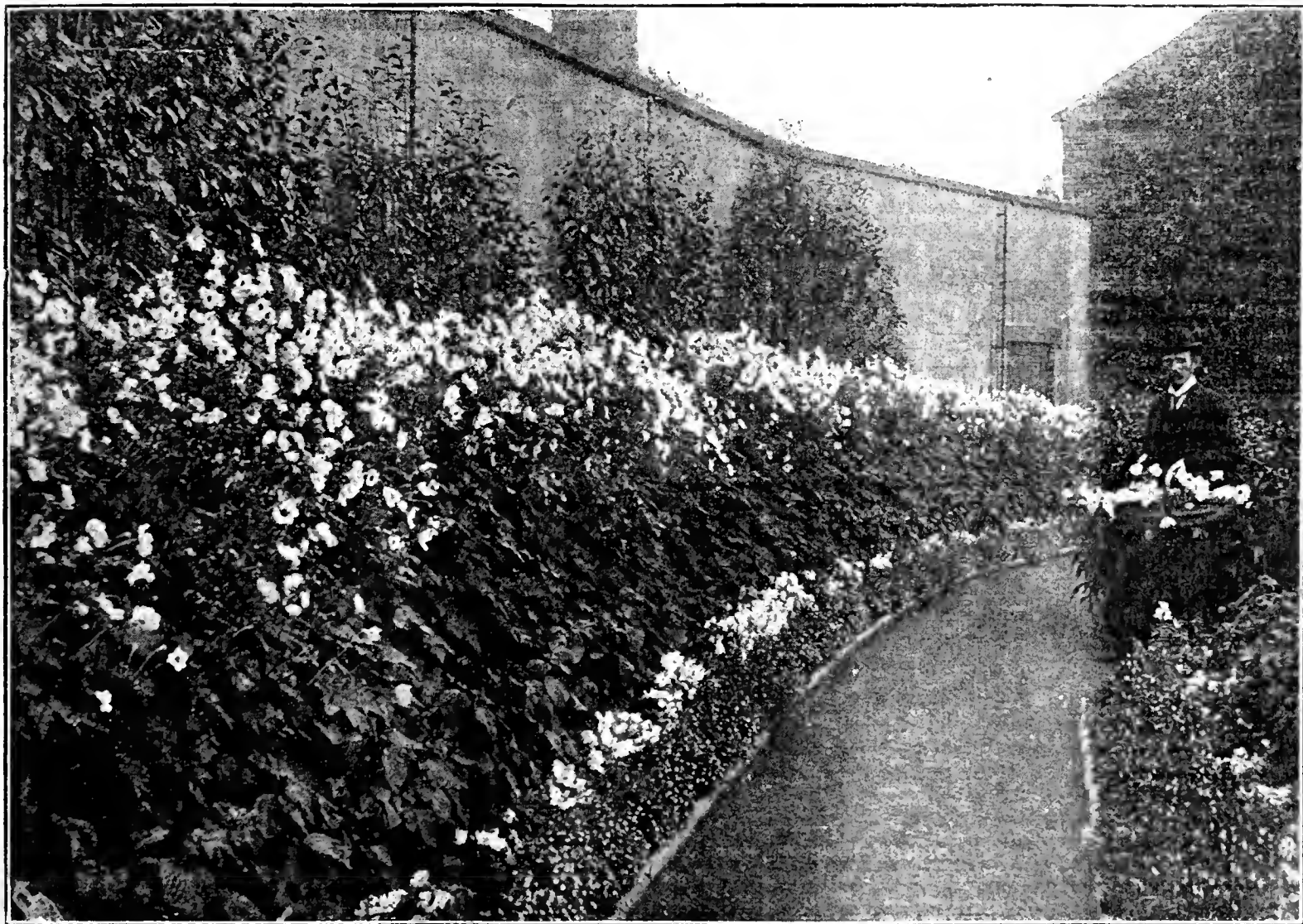
Bergamot Espereu should also enlist the favours of the planting season, because its time of use steps out of the old into the early months of the new year; and while it has this good character to recommend it, it also develops a fine flavour—a point of much value.

Winter Nelis is too well known to expect much notice; yet, while its small size dwarfs its chance, pitted against some of the later show Pears, who can find a fault with it on any other point? If it has one, it is found in its small crop given on bush or pyramid trees. It is worth, and really deserves, a space on a wall.—W. STRUGNELL.

## The White Japan Anemone in a Chester Garden.

The White Japan Anemone is not the type plant, for that bears pink-coloured flowers. According to the author of "The English Flower Garden," the albino form originated at "Verdun-sur-Meuse, in the garden of M. Jobert. From a large tuft of *A. japonica* (pink), a stem arose with pure white flowers." The name of this white Anemone is Honorine Jobert. By the kindness of Mr. G. P. Miln, of the Grosvenor Museum, Chester, we have the privilege to depict a border of this white variety, as photographed in the garden of Captain McGillycuddy, at Bach Hall, near Chester. This is the manner in

which to cultivate such queenly gems—in masses or long and continuous borders. The illustration should serve a useful purpose. The flowering period of the Japan Anemone may be considerably prolonged by having some plants on a north border in the greater coolness and shade, and others on a south. Any friable garden soil will suit it, but undoubtedly the plants respond to generous treatment. Beds once formed may be left for years, and a top-dressing may be given annually after the stems have been cut down. We must congratulate and compliment the owner of so beautiful a garden feature as that here shown, and his gardener too, for the care he must take to ensure such true success.



Anemone japonica in a Chester Garden.





#### Arbutos Berries in Decoration.

The berries of the Arbutos or Strawberry-tree, when obtainable in clusters, are very handsome for use in floral decorations. In Regent Street they are used in a setting of Asparagus Sprengeri in baskets. Within two years these fruits have been offered as edible commodities by certain fruiterers, but they are more attractive to look at than to eat.

#### The Osage Orange.

A tree of the above, about 18ft to 20ft high, is growing on rising ground by the road side at a place called Baileywick, between Petworth and Pulborough, Sussex. It has not so many fruits this year as last year, nor are they so large. A large Horse Chestnut tree is growing close beside it, sheltering from north-east winds. This "Orange" (*Maclura aurantiaca*) is very interesting.—J. B., Petworth Park, Sussex.

#### Chrysanthemums in the Last Analysis.

In the audit of last season, of the Japanese section it is interesting to note that of those varieties which were placed in the first, or "best fifty," the following were not to be found in either of the first or second prize sets in the great vase class, nor the first prize "forty-eight" in the N.C.S. exhibits, viz., Edith Tabor, Lord Ludlow, Phœbus, Mutual Friend, Vivian Morel, Chas. Davis, and Lady Hanham, nor Florence Molyneux, which leads the list of the best fifty in the audit named. Of course, the season may be responsible for some of the missing ones. On the other hand, the following, which were not placed among the "best fifty," were shown in the first and second prize "forty-eight": Sensation, Madame P. Radaelli, Madame B. Wilde, Mrs. G. Golder, Bessie Godfrey, Ethel Fitzroy, Mrs. T. W. Pockett, Duchess of Sutherland, Kimberley, Mrs. R. Darby, Mafeking Hero, Mrs. E. Hummel, Miss Elsie Fulton, and Nellie Bean, whilst the following found a place in the first and second prize exhibits in the vase class, although omitted in the best fifty of the audit: Madame P. Radaelli, Sensation, Godfrey's Pride, and Loveliness. The audit is sufficient to prove that a great change has taken place in only one season.—W. J. GODFREY, Exmouth.

#### Jottings on Pines.

Young plants need liberal ventilation at this time of year to prevent a soft attenuated growth; therefore, afford fresh air whenever the weather be favourable, and avoid damping, as keeping the houses saturated is more injurious than beneficial. Water will be little required, yet the plants should be examined about every ten days, affording a supply to such as need it, and those only; yet extreme dryness is injurious, for any limpness is had at the expense of the tissues, the cells being more or less impaired for growing activity on a recurrence of favourable conditions for development. Lose no opportunity in the fruiting department of closing the house at 85deg, keeping the night temperature at 70deg, or a few degrees less in severe weather. Remove all superfluous suckers, retaining one only, or, at most, two, if stock be required, and then the fruit is more or less sacrificed in favour of the suckers. Such stock, however, is not desirable, for the plants are likely to have the same proclivities as the parent ones. At this time of year it is usual to make new beds of fermenting materials for the young plants. Tan is the best, but it is difficult to procure in some places, more so now than formerly, when less chemicals were used. In most country places Oak or Beech leaves can be had for the collecting, and this being done whilst they are fairly dry, they form an excellent substitute. Those intended for use later on cannot be too dry, placing them in stacks, forming a span-roof and thatching roughly with coarse material, or bracken, reeds, coarse hay or straw. In forming beds of leaves they must be put together as firmly as possible, treading well after placing in a layer of leaves evenly shook out, and so on. Thrown in any way the material settles very unevenly, and gives far more trouble afterwards than needed to do the work properly at first.—PRACTICE.

#### Poterium canadense.

One of the best of herbaceous plants that flower during August is found in this Poterium. It may be likened to a *Cimicifuga* reduced. These plants, together with the pretty *Veronica longifolia*, its varieties and its allies, constitute, when grouped, a novel feature when flowering in the herbaceous border, because of their long spikes. *Poterium canadense* is a very suitable subject to associate with marsh plants, as it grows and flowers very well in a moist situation. Where the practice of growing herbaceous plants in the kitchen garden is carried out, the writer has occasionally seen very large and luxuriant plants of *Poterium canadense*, the liberal treatment bringing it to perfection. In some gardens its name is unknown; in others it may be found labelled *Sanguisorba canadense*, which is perhaps its best-known appellation.—D. S. FISH.

#### Crocus caspius.

Everyone loves the Crocus, but it is not all who venture to leave the beaten track and grow any but the large Dutch spring Crocuses. There is an increasing band of enthusiasts who prize the different species, which are particularly suited for those who possess rock gardens, where the autumn and winter flowering species can be better protected than in the open border. The readers of our Journal who are among the number will no doubt be gratified to learn that *Crocus caspius*, which has been awaiting introduction for many years, has at length found its way into cultivation, and will probably soon be offered by a few specialists in the bulb line. It comes from the borders of the Caspian Sea, and has been sent by the collector employed by a small syndicate. Two well-known amateurs were members, and they have received their share of the collection in capital condition. This Crocus flowers in October and November, the blooms being white, tinged with yellow on the exterior of the petals. *Crocus caspius* is likely to be hardy in this country.—S. A.

#### Carnation, Lady Nora Fitzherbert.

This new Carnation, which received a first-class certificate at the autumn show of the Royal Caledonian Horticultural Society in September last, is probably one of those which will give us a number of useful varieties on account of its floriferousness and the dwarf habit it possesses. It is, I believe, a seedling from Germania, a yellow which has not yet been superseded, and it has retained the fine colour and floriferous habit of its parent, with a new habit in the shape of dwarfness. It grows only some 8in or 9in high, and is so sturdy in its growth that it requires no staking. If Messrs. Laing and Mather, of Kelso, who raised the plant, can only give us a number of varieties of the same habit we shall be greatly indebted to them. Exquisite as are the Carnations of the time for cutting, a bed disfigured by wire or other supports is not so pleasing as it should be with such lovely blooms as the Carnation gives. With Lady Nora Fitzherbert, however, one might have a splendid bed or edging, while for a front row in the Carnation house we could hardly have anything better. The plants appear all that we can desire for vigour and for freedom in producing "grass."—S. ARNOTT.

#### Floral Variety in November.

The following list of flowers were in full bloom in Westley Hall Gardens, Bury St. Edmund's, on November 11, 1902: *Achillæa tomentosa*, *Ageratums* (in profusion), *Agrostemma*, *Autirrhinums*, *Alyssum*, *Anemones*, *Auriculas*, perennial *Asters* in variety, *Aubretias*, Japanese *Anemones*, *Calceolarias*, *Coreopsis* (in profusion), *Canterbury Bells*, *Chrysanthemums* (in profusion), *Clematis* (purple), *Chrysanthemum maximum*, *Cornflowers*, *Dahlias* (in varieties), *Dianthi*, *Eschscholtzias* (yellow and white), *Erigeron philadelphicus*, *E. mucronatus*, *Fuchsias*, *Geums*, *Godetias*, *Gazanias*, *Gladioli*, *Helenium pumilum*, *H. autumnale*, *H. striatum*, *Heliotrope*, *Jacobæa*, *Lavender*, *Love-in-the-Mist* (*Nigella*), *Leycesteria formosa* (small bushes), *Mignonette*, *Nicotiana affinis*, *Nemesia strumosa* Suttoni, *Marigolds*, *Tropæolums* (*Nasturtiums*), *Montbretias*, *Oenothera taraxacifolia*, *Æ. Youngi*, *Pentstemons*, *Phlox Drummondii*, *Iceland Poppies*, *Plumbago Larpentæ*, *Pyrethrums*, *Prunella vulgaris*, *Pansies*, *Roses*, *Sweet Peas*, *Scabious*, *Sunflowers* (miniature), *Trollius europæus*, *Rudbeckia Newmanni*, *Spiræas* (shrubby), *St. John's Wort*, *Tropæolum tuberosum*, *Violets*, *Verbena* (sweet-scented), *Valerian* (red and white), *Veronica repens*, *Wallflowers*, scarlet *Pelargoniums*, bedding and Ivy-leaved. Our place is very high.



### Illegal Showing.

It is clear, from the three excellent letters in last week's *Journal*, that this matter is much more prevalent than I, for one, had any idea of. I am sure, Mr. Editor, you will allow it is of the utmost importance, and I hope you will not, if possible, let it drop till some means have been suggested for effectually dealing with it. "Withholding prizes fraudulently won," as mentioned by Mr. Wm. Taylor, ought to be sufficient, but is not when the matter has got so far as it seems to have done. Prosecution in a law court seems now wanted to clear the air. I thoroughly agree with the capital letter of "Quiz," who has convinced me I was unjust to "A Yorkshire Grower," and owe him an apology, which I here heartily offer. I had no notion the matter had gone so far, having, it seems, as "Quiz" suggests, not been "privileged to peep behind the scenes." If I had been, there would have been a shindy, if he will take my word for it. But what about Mr. Wm. Taylor and the Grapes? (page 512). Had he no alternative? I think I would have tried pretty hard to find one, even if it consisted in resigning my office as judge right off and leaving the place. But it is pretty clear, from his statement about the secretary, and the other letters, that it is the executive—the officials of the shows—who are most to blame, by refusing to take action, and winking at dishonest proceedings. Quis custodiet ipsos custodes? It is very difficult to say. When things have got as bad as these letters seem to show, a "reign of terror" is set up to a certain extent, and it is, one must acknowledge, a serious matter for one in a dependent position to "bell the cat." I can only suggest that honest men in each society put their heads together, stand by one another, and put forward a general motion without reference to any individual case, at the annual meeting. Still, it does seem as if there must have been originally, when the evil was beginning and before it had grown strong, a little want of pluck among the honest men.—W. R. RAILLEM.

After the appropriate remarks by "W. R. Raillem," page 490, in reply to "A Yorkshire Grower," on this subject, one would think that the latter must be now convinced that he has missed a golden opportunity of doing his part towards arresting the evil he complains of. I believe that all horticultural societies have a rule embodied in their schedules, with the object of protecting honest exhibitors against such practices as "A Yorkshire Grower" alleges to have taken place, within his own knowledge. Committees of management cannot very well act on vague assertions and cautious innuendoes. If those in possession of such facts were to bring these timely and promptly before them they would be obliged to act, according to their own rules. This subject has given "W. R. Raillem" an opportunity of having a dig at the management of northern exhibitions, of which he avails himself thus: "This is not the first time that exhibitors 'living down south' have heard whispers of lax proceedings in the north, and even that they are winked at and condoned." This statement is so vague that it is impossible to deal with it. After, however, noticing the observation made by "F. W." respecting the National Chrysanthemum Society and its management—bringing to mind something more than whispers of similar things in the past—down south, the thought occurs that the reproof or injunction in reference to the "beam in your own eye" might fitly apply here. The naïve saying by Artemus Ward that "there is a great deal of human nature in man" is frequently manifested in many ways, whether it be "down south" or "up north." I happen to have some experience of exhibiting in the south, but considerably more so in the north, and I know of no committee of management there who would tolerate or wink at or condone such practices as "Yorkshire Grower" possesses knowledge of, if these were brought clearly and timely before their notice.—R. M., York.

### The Scarcity of Journeyman Gardeners.

After reading your correspondent's remarks (page 513) on the above, I can say the best way out of the difficulty is to offer better wages for first class journeymen, then, perhaps, some of them will not be in such a hurry to get foremen's places. In advertising one should state that only those who have had a good training should apply. This is a time of competition, and young

men growing up with active brains are looking round to see how and where they can get best wages, and gardening may some day have to be paid on a higher scale. Wages have risen among mechanics and indoor servants, and when we consider what is required of a head gardener and his under-men I think all employers ought to be pleased to improve the scale of wages, so as to uphold horticulture in this country in the best possible way.—A. J. L.

### A Mild Season.

In last week's *Journal of Horticulture* you record some interesting and unusual things about various crops of fruit gathered in November. To-day, December 5, I send you Strawberries just gathered from a seedling, St. Joseph, from the open ground. Unfortunately for the Strawberries, the frost of last night has stopped further progress in ripening.—W.

A nice dish of Raspberries, of which we send you part, was picked in the garden of Mr. G. N. Burden, Oakfield, Teignmouth, to-day, December 2. We doubt if the Riviera could produce better in December. We thought it would be of general interest as showing the mildness of our climate.—W. HANNAFORD AND SON, Teignmouth, Devon.

### Fugitive Notes.

"MANY MEN, MANY MINDS."

In the *Journal of Horticulture* for December 4, "G. H. H." gives expression to thoughts which doubtless have frequently arisen in the minds of many people conversant with the number of plants, fruits, and vegetables that, year in and year out, pass before the R.H.S. committees for honourable mention, or that silence, standing so often for condemnation. That the method of sitting in judgment upon the various products brought to the notice of the committees has its drawbacks, few will be slow to admit; but who can point out a better way? It is obvious to anyone that whatever is shown at the Drill Hall is sent in its best possible condition, and that the censors must appraise its merits, novel or otherwise, as it appears before them, without relation to habit of growth, difficulties of culture, &c. There are, it is true, exceptions when allowance can be made on these points; and when this is the case, a novelty can be more nearly esteemed at its proper worth. But here is without question the great drawback to the present system of awarding certificates, and the reason why so many of the honours awarded confer on the recipients benefits of such a fleeting nature. Still, it is to be feared that no better plan is likely to be forthcoming. We must go on taking for granted that whatever has been approved and honoured by the R.H.S. must be worth buying and growing, and only by actual trial under everyday conditions do we find that this plant with the mystic A.M. attached to its name, or that fruit so lately granted a F.C.C., fail to satisfy the needs of those who desire a combination of beauty and utility.

### An Imposing Almshouse.

Whether rightly or wrongly the above was the ejaculation that involuntarily arose to my lips when the illustration of the plan of the proposed Hall of Horticulture was disclosed to my view on page 521. Mr. Shayler's modifications may be, and no doubt are, everything that could be desired as far as they go; but, alack! modifications here will scarcely meet the difficulty. Mr. Wood's suggestion of competitive plans would involve a loss of time and some extra expenditure, and truly both might well be sustained in the hope of securing a properly arranged structure, and outwardly a fitting edifice, which for many, many years to come must be the centre of the horticultural life of this country. It may be as well to say that against the plan, as a plan, I have not a word to say, for some purposes it is possible the ideas it embodies might be everything desirable.

### Illegal Showing.

This subject is a very old friend to those who have studied the pages of the *Journal of Horticulture* during past years. Nevertheless, it is a matter that will bear repetition and stirring up. That there are still those among exhibitors who lack a proper sense of right and justice in competition with their fellows is well known; yet to counterbalance this we have a great body of those whose rigid uprightness is in itself no light answer to the charges so recently brought against showmen in these pages.



## N.C.S. Judges.

The complaint of "F. W." under this heading in a previous issue reminds me of the words of a friend: "Whenever you hear a man grumbling about judges or judging, you may be sure in nine cases out of ten that he is a disappointed exhibitor." How often this has proved correct I am not prepared to say; but frequently it has come true in the past under my own observation, and I have not the slightest doubt the trouble will arise many a time and oft in the future.

## The Scarcity of Journeymen Gardeners.

Here again we have an old friend very ably touched on by "E. E. R." on page 513. That there is a scarcity of young men willing to devote themselves to a gardener's career is not to be wondered at if the attractions and greater emoluments of other avocations are for one moment considered. "E. E. R." is afraid the coming generation of gardeners will not enjoy the palmy days of their predecessors. One would have thought that with a coming scarcity there would have been a tendency for higher rates of payment and greater privileges. It is not wise to look too far ahead, but if the experience of the present generation of gardeners is at all reliable as a basis for forecasting the future, expert gardeners will be needed in but few establishments in time to come. The man in the street, or his employer who reads a gardening paper once a month, if to be believed, may be expected to know more of the craft than those who have served a lifetime in the ranks.—A PROVINCIAL F.R.H.S.

## The Horticultural Hall.

It is an old adage that what is everybody's business is nobody's business, although, fortunately for the reputation of the world, there is far increased disinterestedness and singleness of purpose awakened of late years, which proves our march to a higher plane. Relatively to wealth distributed in the world, our great Babylon constitutes an unenviable exception in the race for honourable distinction in this connection, and the spirit of sordid venality is more or less prominent. Many of the sections of the administration are unevenly balanced in this vast metropolis, and we see utter neglect of first principles here, and lavish prodigality there, within a stone's throw of each other. London can furnish no brilliant example for imitation by less notable centres. This condition of things is prominently noticeable in relation to horticulture, which suffers ignominy, especially at the hands of our numerous so-called amateurs in well-to-do positions, who, in reality, are much more numerous for the purpose of carrying off substantial prizes for exhibits than showing backbone in furthering the behests of horticulture in a national sense. If we measure not the potential, but the actual, wealth of these isles against that of the United States, we may, in a sense not geographical, compare our English counties to the States of the great American Republic in this way, that, as an instance, the county of Kent might be likened to the State of Massachusetts, and allowing the section of London on the Kentish soil to count as Boston does in that State. Now we find that pushful Boston has been on the qui vive after a horticultural hall coincident with London, and has dedicated a goodly sum, equal to £120,000, towards the grounds and hall for a suitable establishment. Kent, with the section of London pertaining to it, is probably as affluent as Boston and its State, yet it not only does not equal Boston in its horticultural worth, but Kent, the "Garden of England," and the whole of London besides, and the latter as the representative of the wealth of the kingdom and the dignity of the Empire, cannot collect towards the ideal hall and its cost more than the fraction beyond £100,000 out of the £120,000 already secured by Boston. And the Boston Hall is completed during the same few years that London has wasted in ruminating, and has in effect been literally overwhelmed by the attenuated claim on its prodigious resources for a sacrifice on the altar of horticulture.

We have been authoritatively informed a few weeks ago by the Royal Horticultural Society that the total promised towards the hall is just over £18,000, where the modest sum of only £40,000, for the metropolis of the world, is the limit of the claim for the hall. If these figures here mentioned could not be substantiated, the proportions cited seem to constitute a gross libel on the love of flowers, which is assumed, at least, to pervade the nation, and to assist in its æsthetic elevation to a point in this connection abreast of the world, which we have a claim to lead by the ethical magnificence of some of our national institutions.

But this comparison does not even show us true proportions. About twelve years ago a similar attempt at the creation of a hall was on the point of succeeding, about £27,000 having been promised towards £40,000 required, when the unfortunate Baring Crisis knocked all financial matters on the head, and the

project disappeared from among practical politics. It was an evil time for London and true horticulture. These £27,000 were promised among Fellows of the Society, numbering under 2,000, twelve years ago, whereas the present numbers are three times greater, or about 6,000, showing the intended sacrifice of £14 per head on the previous occasion, and only £3 promised on the present one.

Nor is this the only ground on which "love of flowers" merely skin-deep can be proved in wealthy Britain. The flimsy superficiality is emphasised when we read of 1,000 applications, as occurred the other day, received by the owner of one private garden requiring a head gardener. Horticulture is actually going begging, which finds significant expression in the parallel case that few private establishments care to afford anything beyond the kind of plants that can be most effectively ravished for the decoration of dinner-tables and other social sensations—flowers to be cut! Yes! plants to cut from; we want nothing else! reiterate our *nouveaux riches*, and, alas! many of the *anciens riches* as well.

Mr. Ebenezer Howard is proposing to develop the problem of garden cities among us in order to raise our standard of life from the present sordid environment; £20,000 were required to start preliminaries—the Pioneer Company—and this sum has been furnished as an act of philanthropy from among the (about) 1,700 members constituting the Garden City Society. All but £1,000 subscriptions—viz., £19,000, have been promised in the course of less than six months, so that virtual success crowns the effort.

The Royal Agricultural Society recently, in fixing upon a permanent locality for its great annual show on a site near Willesden, easily obtained the necessary funds from its Fellows within a short time, and furnishes another object-lesson for the accentuation of the perfunctoriness of purpose attaching to the cult of Flora in the well-to-do circles of this great metropolis. As to the rapidly increasing ratio of the annual growth of the memberships of the R.H.S., we would fain desire to claim the greater proportion as devotees from real love of horticulture, intent upon furthering its true interests, and not merely joining as a freak of fashion. Were the former hypothesis admissible, London might rightly, and with real pride, have been enabled, logically, to point to the creation of an adequate mansion and real home of horticulture, set appropriately in park-like surroundings, instead of being compelled, after a sojourn in a quasi-dungeon, humbly to adopt a retreat which seems to be inadequate to needs of even early coming years, and demanding ten times the amount now modestly required.

I think I read a recent statement that about nine-tenths of the sum total promised are attributable to the Council of the Royal Horticultural Society and their older and nearest friends, which would further emphasise the extreme want of sympathy on the part of the many well-to-do or even affluent people, whose joint promises come to a couple of thousand pounds out of about £18,000 promised on this reckoning. Also some of those exploiting the modest space for their trade exhibits are far from being conspicuous in recognising their liability. As a case in point, the modest hall proposed seems to be inadequate to the requirements of our Rose and Chrysanthemum Societies for their annual shows, which is a matter doubly regretful, as the Aquarium is on the point of disappearing, which hitherto gave shelter to Chrysanthemum interest. Even King Edward and our Prince of Wales cannot stimulate fashionable enthusiasm, though they have kindly sent contributions.

A correspondent in one of your contemporaries asks what is the cause of the existing state of the gardeners' labour market, and vaguely replies that it cannot be that employers are taking less interest than hitherto in horticultural matters, judging from the increase of the number of new Fellows elected to the Royal Horticultural Society. My earlier reference to these numbers may slightly modify his optimism. Finally, he opines that it is now more a matter of wage than anything else. According to my point of view, the extremely low wages mostly prevailing for service of really good gardeners, from whom much is expected, provide another peg on which to expose the relative degeneracy of horticulture on its own account. Employers who would make horticulture their obedient slave infinitely outnumber those aiming at a superior plane in their sympathies. The true meaning is the ignorance and indifference of employers in most gardening matters, ignorance which proclaims itself in that of most of the "common things" in our environment.

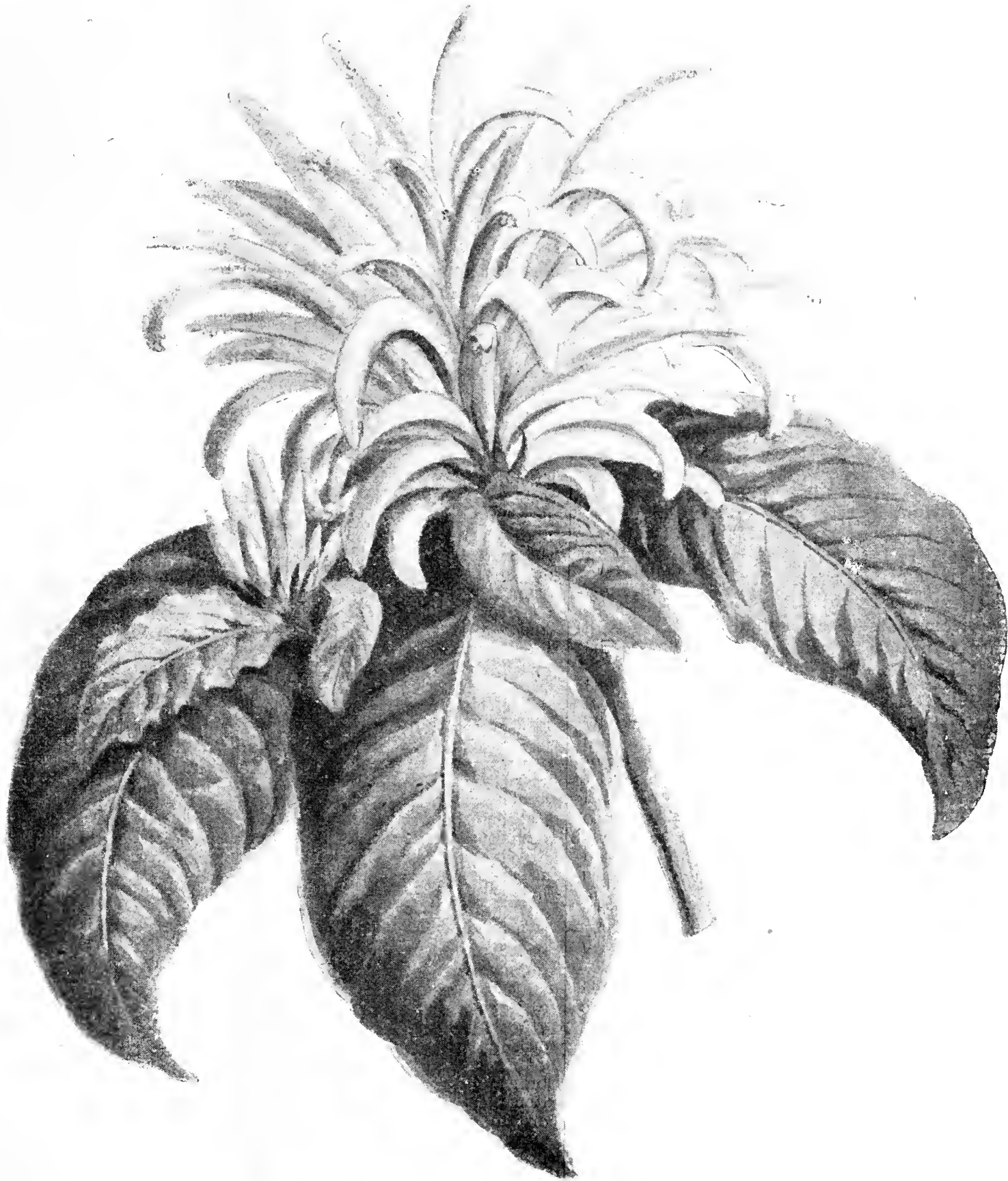
The suggestion made on page 488 of your issue as to structural improvements on the plans submitted by the R.H. Society should find full application, for they are decidedly good.—H. H. RASCHEN, Sidcup, Kent, December 1, 1902.

P.S.—We are editorially, but apologetically, informed in the "Gardeners' Chronicle" of December 6, in relation to this subject, that "one need not point to Boston, Philadelphia, or even to Amiens, because the conditions might not be applicable to us." Such a sentiment seems to be a feebly disguised acknowledgment of our ineptitude and illiberality and another spirit elsewhere. Nor does the "noble work accomplished by the Shropshire Horticultural Society," referred to in the same issue, "alleviate

some of the humiliation we should otherwise feel," any more than the private munificence that benefited Liverpool so greatly of late years in this connection. It supplies in no wise extenuating circumstances, but emphasises the want of the sense of proportion from which the execution of this problem suffers in our great metropolis.

The limited results so far attained are of an extremely humiliating character. It is by no means too late in principle, and in fact, to conclude that an infinitely greater effort will yet be made in order to place us abreast of the moral claim which

charge of gardens should have a wide knowledge of plants of all sorts, and make it an aim in their professional practice to resuscitate, or bring forward from time to time, classes of plants of different characteristics, and to cultivate each in its turn to the greatest perfection. Herein lieth the true art of gardening, and the secret of its wonderful interest. Instead of gardeners in different gardens striking out in lines of their own, one finds that all, or nearly all, follow the beaten track. *Jacobinia chrysostephana* has been taken in hand by Messrs. J. Veitch and Sons, Limited, of the Royal Exotic Nursery, Chelsea,



***Jacobinia (Cyrtanthera) chrysostephana.***

horticulture and our environment emphatically impose upon us, and that some public-spirited men of wealth will yet join the chief donors. I am authoritatively informed that the £20,000 desired by the Garden City Association had been fully subscribed.—H. H. R., Sidcup, December 6, 1902.

#### **JACOBINIA (CYRTANTHERA) CHRYSOSTEPHANA.**

This plant is one of many others whose great merits have been, or are, entirely overlooked by gardeners. We consider it an essential quality in the faculty of gardening that those in

S.W., and when plants were exhibited by them before the Royal Horticultural Society on November 18, an Award of Merit was bestowed by the Floral Committee. It is an Acanthaceous member, introduced from Mexico in 1870, and has been figured in the "Botanical Magazine (t. 5,887), under the name of *Cyrtanthera chrysostephana*—the corymbose flower-heads being golden yellow, or rather golden apricot in colour. Our illustration gives a good idea of the terminal clusters. The plants are treated the same as *Justicias*, which are easy stove subjects to cultivate. A number of well-flowered and foliaged plants furnish an invaluable addition to the stove in winter, and they are of a very serviceable height—1½ft to 2ft high when grown in 5in pots. Messrs. Veitch's plants were cultivated in their new branch nursery at Feltham, Middlesex.



# NOTES & NOTICES

## Appointment.

Mr. Wm. Taylor, late head gardener at Rockingham, Boyle, Co. Roscommon, as head gardener to Mr. Walker, at Bradfield, Cullompton, Devon.

## Eucalypti as Water Storers.

Eucalyptus and other trees of the Australian deserts store up water, which the natives obtain by cutting up the roots and standing the pieces on end.

## Royal Meteorological Society.

At the ordinary meeting of the society, to be held at the Institution of Civil Engineers, Great George Street, Westminster, S.W., on Wednesday, the 17th inst., at 7.30 p.m., the following papers will be read: "The Climate of Cyprus," by C. V. Bellamy, M.Inst.C.E., F.R.Met.Soc.; "The Eclipse Cyclone of 1900," by H. Helm Clayton. As the balloting list for the council for the year 1903 will be prepared at the next council meeting, it is requested that those Fellows who wish to suggest Fellows for election on the new council will send in proposed names before the 16th inst.—W. M.

## Coronation Park for Ormskirk.

The fine old Lancashire town of Ormskirk will at no distant date be enriched by the addition of a public park, the plans of which are now before the Urban District Council. The extent of the ground is 7½ acres, and provision has been made for a lake with central island, approached by rustic bridges, with a 9ft walk round the inside of the park. Lord Derby receives £2,000 for the land, and of this sum he will, with his usual generosity, remit £1,000 when the scheme is carried out. At the council meeting held on Tuesday it was announced that Lord Derby had also given without payment other land that the sub-committee found would be required to bring the scheme to a successful issue.—R. P. R.

## Mushroom Farming.

This time of year is the best season for the Mushroom farmer. The man who now has his Mushroom beds full can make money every day. A great many market gardeners say that Mushroom farming does not pay, as the expense involved in the production of the delicious fungi runs away with all the profits. The two difficulties in producing Mushrooms are the necessity of a high temperature and the requirement of a very large quantity of manure. The Mushroom beds must be kept at a temperature of about 60deg, and it takes about £15 worth of manure to produce a ton of Mushrooms. The value of a ton is about £50 at this time of year, so that the possible profit appears large, but there are many other expenses besides the cost of manure. August and September are, of course, bad months for the Mushroom grower, for the fungi can be picked out of doors at that time of year.

## A Competition for a Bothy Plan.

The warmly supported discussion of the young gardeners' bothy question, which lasted over a number of our issues in the early summer of this year, will be fresh in the minds of readers. It was then proposed to call for competitive plans of a comfortable bothy for gardeners, and this competition was fixed to be closed by Christmas. It was not deemed a difficult matter to draw a suitable and simple bothy plan, but during the long days of summer and autumn the Editor believed that few had time or the desire to take up rule or compass. The plans now ought all to be in our hands by Thursday, December 25. The rules of the competition are as follows: The plan, drawn to scale, must not exceed 7in broad by 7in deep, and must be clearly defined on stout paper. The plan must provide suitable accommodation for six men, and the cost of the building ought not to exceed £250 to £300. A statement of the general items of cost should accompany the plans, together with any written comments thereon. The sender's name and full address should be enclosed when sending the plan, and the sender will alone be held responsible for it. The competition is open to all. The prizes are: 1st, £3; 2nd, £1.

## Devon and Exeter Gardeners.

A paper was read at the latest meeting of the Devon and Exeter Gardeners' Association, at the Guildhall, Exeter, by Mr. W. Andrews, of the Exeter Public Grounds, on "Miscellaneous Bulbous-rooted Plants for the Flower Border." The chair was occupied by Mr. S. Radley.

## Newcastle Horticulturists.

The annual meeting of the Durham, Northumberland, and Newcastle-upon-Tyne Botanical and Horticultural Society was held on December 8 at the offices of Messrs. J. Hindhaugh and Co., Cloth Market, Newcastle. The chairman of the society, Ald. J. Baxter-Ellis, presided. The secretary, Mr. I. B. Reid, presented the annual report and statement of accounts, showing a balance in hand amounting to £21 11s. 5d. It was agreed to abandon the spring show.

## Weather in the North.

Winter has at last closed upon us in the north. Since the morning of the 4th inst. dense hoar frost has whitened all the lower grounds, and the higher hills are covered with snow. Frost of from 8deg to 20deg on the mornings of Sunday and Monday has prevailed, but a good deal of sunshine has brightened the past week.—B. D., S. Perthshire.

[Seventeen degrees (Fah.) of frost were recorded on the 6th at Eynsford, in Kent.—Ed.]

## Electroid Gas.

Remarkable properties are claimed for the gas called electroid by its discoverer, Professor Rychnowski, of Lemberg. When condensed, the gas assumes the form of tiny greenish-blue balls, which are elastic like indiarubber, and emit rays under the influence of which the growth of plants and flowers is greatly accelerated, and organic matter is prevented from decomposing. The "Family Doctor" says that Rosebuds burst into flower under it, and flesh meat has been kept fresh for two years.

## Departmental Committee on Poisons.

The Departmental Committee on Poisons, which has been carrying on its work for about a year, and has held some seventeen or eighteen sittings for the reception of evidence, has had a meeting to consider the draft report of the Chairman, Sir Herbert Maxwell. Though the report has not yet been finally adopted, it is understood that it will recommend the addition of a third schedule to the Pharmacy Act, under which persons who are not authorised pharmacists may be licensed to sell poisonous articles of use in agriculture and horticulture, subject to regulations to be laid down by the Privy Council in the interests of the public safety. These regulations are expected to insist on special shapes and labels for bottles and packages containing poisonous substances, and other alterations are also to be recommended in the Pharmacy Act schedules, which will have the effect of liberating the sale of sheep-dips, insecticides, and other similar articles, which has hitherto been restricted to pharmaceutical chemists, and placing it under reasonable restrictions in the hands of persons more directly concerned with agricultural and horticultural industries.

## Notes from Hamilton, N.B.

The variable nature of the weather for some time past has now given way to frost. Few will be sorry for the change, for almost anything would be an improvement in comparison to the wet of the last week or two. This morning (4th inst.) we had 12deg F., a rather hard frost right off, and following on a twenty-four hours' rainfall. The consequence was that the ground was frost-bound, and though trenching or digging were possibilities, yet the little now remaining to be turned we prefer to defer till it comes fresh. The soil of this district is cold enough in its normal condition, and we opine that, however beneficial the burying of frost crusts may be in light soil, it must be always a very questionable action to bury them in cold clayey soils. This district is very much engrossed in the game of curling when the frost sets in, and not a few will hail the advent of the present auspicious prospects with delight. A day or two on the ice renews the vigour so much used up during the trying times of the past season. And the gardener, if any person requires revigoration, is certainly one who does. So we wish him to have his few days' frost and a good game at the grand old sport—the roaring game.—D. C.

**Gainsborough's First Public Park.**

Gainsborough will soon be in possession of its first public park, which is to be laid out at the back of the waterworks. A tree-planting ceremony in connection with the event took place on Saturday, those who set the saplings being Mr. Barlow, the High Sheriff, the Rev. F. H. Dalby, Miss Barlow, Miss Jarman, and Miss Dixon.

**The Chrysanthemum Analysis.**

Mr. Edwin Molyneux informs us that he hopes to be able to complete this year's Chrysanthemum analysis in time for our next issue, December 18. With four or five exceptions the voters have now (December 7) returned their papers. We may here add that the issue containing the Rose analysis was "out of stock" in the same week, and this after a largely increased impression had been brought off.

**United Horticultural Benefit and Provident Society.**

The monthly committee meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday evening last. Mr. C. H. Curtis presided. Seven new members were elected. Twelve members were reported on the sick fund. Two members were granted £1 10s. each from the convalescent fund. A cheque for £59 18s. was granted to a lapsed member, being the amount standing to his credit in the ledger.

**Freedom of Reading to Martin J. Sutton, Esq., J.P.**

Wednesday, December 3, was a most eventful day in Reading, the occasion being a dual one—the unveiling of the statue of His Majesty King Edward VII., presented to the town by Mr. Martin John Sutton, J.P. (of the renowned firm of seedsmen), and the conferment of the honorary freedom of the borough on Mr. George William Palmer, J.P., M.P., and Mr. M. J. Sutton, as some recognition of the manifold services they have rendered to the town of their birth and to their country. The statue of King Edward is an imposing ornament to this lovely Berkshire town.

**British Folk for Canada.**

Some weeks ago you published a letter of mine in which attention was called to the way aliens were rushing in to settle up the great West of Canada, the finest Wheat belt in the Empire. My suggestion was that English, Scottish, Irish, and Welshmen should go out in large parties to take advantage of the Canadian Government's offer of 160 acres of this fine Wheat land as a free homestead to each man over eighteen years of age. Hundreds of letters have been sent by those wishing to go asking me to organise a large national movement for next March. This is now being done, and already a large party is forming from all over the kingdom for March, 1903, to be followed by a supplemental one in 1904. Those who contemplate going to Canada can obtain all particulars of the movement by sending a stamped addressed envelope to my private address, Alexandra Park Road, Wood Green N. At the same time, it should be distinctly understood that I am not an emigration agent, and that I receive no remuneration whatever from anyone in this matter, neither am I in a position to render financial assistance to those who might like to go but cannot find the funds. Every man must pay his own way, and should be possessed of about £100 upward, though others who have much less may go upon homesteads and work them by co-operating with two or three others. The Canadian Government has been approached to set aside a large area for the exclusive settlement of this party, and the selection is now being completed with very satisfactory results. It will be somewhat larger than the County of Middlesex, and is situated in the now famous Saskatchewan Valley. We have also the assurance that a railway will be laid through the settlement in 1903, to be completed to Edmonton by 1904. Those who cannot go before 1904 will probably be allowed to pay their Government registration fee of £2 here, so that a homestead of 160 acres may be held for them in this same district. I am told that the prospects of the whole Saskatchewan Valley are so good that by 1904 or 1905, with the present rate of settlement, the free grant lands will have been largely appropriated. The Americans have already taken up a large amount; now let us put in a good solid party of British folks, and take the rest before it is all alienated.—(Rev.) GEORGE E. LLOYD, Special Deputation Secretary, Colonial and Continental Church Society.

**Death of Eliza Mary Fenn.**

We much regret to announce the death, on December 6, at Sydney, Australia, of Eliza Mary (Lily), eldest and dearly loved daughter of our old contributor, Robert Fenn, Cottage Farm, Sulhamstead, aged thirty-two.

**Sussex Weather.**

The total rainfall at Abbots Leigh, Haywards Heath, for the past month was 3.47in, being 0.13in below the average. The heaviest fall was 1.08in on the 8th. Rain fell on thirteen days. The maximum temperature was 60deg on the 6th, the minimum 26deg on the 21st; mean maximum temperature, 49.26deg; mean minimum, 38.22deg; mean temperature, 43.74deg, which is 0.54 above the average. This may be said to have been an average November, wet and stormy the second and fourth weeks, otherwise fair weather, but with little sun. The first frost of the season occurred on the 18th and on the four following nights.—R. I.

**November Weather at Belvoir Castle.**

The prevailing direction of the wind was S.E.; total nine days. The total rainfall was 1.53in; this fell on fourteen days, and is 0.87in below the average for the month. The greatest daily fall was 0.30 on the 29th. Barometer (corrected and reduced): highest reading, 30.436in on the 18th at 9 a.m.; lowest reading, 29.218in on the 28th at 9 a.m. Thermometers: highest in the shade, 58deg on the 1st and 6th; lowest, 23deg on the 22nd; mean of daily maxima, 48.33deg; mean of daily minima, 38.30deg; mean temperature of the month, 43.31deg; lowest on the grass, 20deg on the 22nd; highest in the sun, 95deg on the 1st and 2nd; mean temperature of the earth at 3ft, 47.46deg. Total sunshine, 68h 55m, which is 7h 3m above the average; there were eleven sunless days. The temperature has been a little above the average. Dahlias and Scarlet Runners were cut by the frost on the 22nd. Roses have been exceptionally good this autumn.—W. H. DIVERS.

**Bristol Gardeners' Association.**

This society held a meeting at St. John's Rooms, Redland, on the 27th ult., Mr. E. Poole, F.R.H.S., occupying the chair. The subject for the evening was "Fungus," the lecturer being Mr. Harding, of Clifton, and it need hardly be said that his lecture was a most instructive one. Mr. Harding was unanimously accorded the hearty thanks of the meeting. His lecture was much enhanced by fifty water-colour drawings very kindly lent by Mr. Wheeler, Queen's Road, Clifton, which, to say the least, were beautiful in the extreme, and he was voted the sincere thanks of the association for his kindness. The prizes for the evening were for a vase of autumn foliage and berries, for under gardeners only, the prizewinners being Messrs. Heeford, R. Poole, and W. Coombs. A certificate of merit was awarded to Lady Cave (gardener, Mr. Poole), who takes such a kindly interest in the doings of the association, for a Pineapple and a collection of Fungi; one also being awarded to Mr. A. Cole (gardener, Mr. Bird), for a fine bloom of Florence Molyneux Chrysanthemum.—H. K.

**Newport (Mon.) Gardeners'.**

On Wednesday, November 26, the usual meeting of the above association was held, and a very able and practical paper on "The Cultivation of the Strawberry" was read by Mr. P. Garnish, of the Bristol Gardeners' Association. The lecturer, who showed by the very able manner in which he handled his subject, that he was a thorough master of Strawberry culture, first made some remarks on the introduction of the various varieties of the Strawberry, then proceeded to give practical directions to ensure the very best results. He gave directions as to the preparation of the soil, also the runners, advocating growing plants specially for the production of the runners, not allowing them to fruit. A discussion followed, in which Messrs. Jones, Harris, Pegler, Sharratt, and others took part. A most hearty vote of thanks was accorded Mr. Garnish for his paper. Certificates of merit were awarded to Mr. Parkes for a well-flowered plant of *Oncidium Forbesi*, to Mr. Sharratt for two well-flowered plants of *Cattleya labiata*, and to Mr. Long for four splendid bunches of Grapes. Votes of thanks were accorded to Messrs. Wiggins, Harris, Daniels, and others, who staged various plants. Mr. Daniels presided over a good attendance.



### A FOUR-FLOWERED TULIP.

Through the kindness of a correspondent, we some time ago received the photograph of a four-flowered Tulip, of which an excellent illustration appears. It is decidedly uncommon to see or hear of one Tulip bulb throwing four flowers and all on one stalk. In our own experience this is the first instance we can recall. It will be noticed that an offset has also produced a small flower, as shown in the figure herewith.

### Ardgowan, N.B.

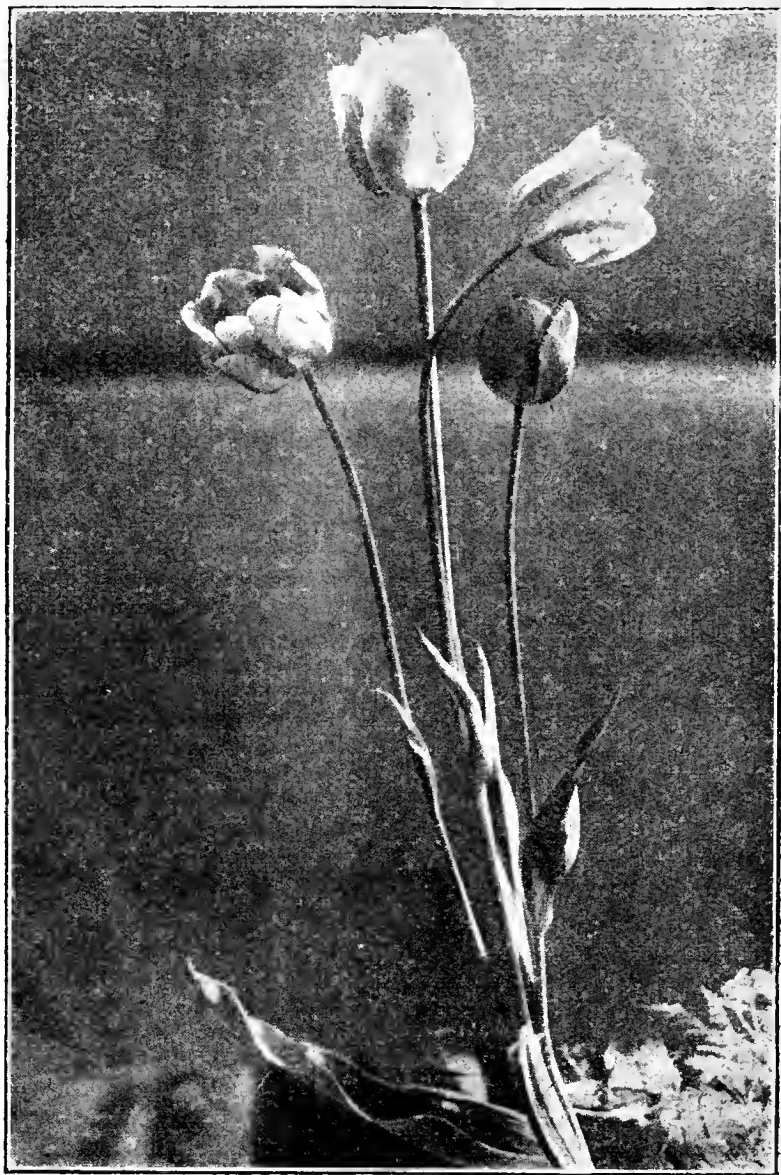
Amongst the many stately mansions that bestud the shores of the Firth of Clyde, few can equal, and none excel, in beauty of situation and grandeur of environment that of Ardgowan, the palatial residence of Sir Michael Robert Shaw-Stewart, Bart. Situated upon a plateau overlooking the Firth of Clyde, it commands extensive views of some of the most beautiful and enchanting scenery imaginable, embracing both land and water. From the terrace in front of the mansion the view is one of surpassing grandeur; away towards the right across the waters of the Firth tower the Cowal Hills in rugged grandeur, clad to the summit in their purple mantle of Heather; while at their base and skirting the shore numerous handsome villas peep from out their leafy screen of trees. Right in front but further away lies the fertile islands of Bute and Arran, with the rocky peaks of Goatfell in the latter dimly descried on the western horizon. Close at our feet lie the waters of the Firth, glimmering in the autumn sunshine like a sea of molten glass, across whose shining surface glides many a graceful, white winged yacht; or anon the scene may change when Boreas, in playful mood, comes careering down the rocky glens, lashing the waters in his boisterous mirth, and dashing the white-crested waves with resounding roar upon the rocky beach. Turning to our left hand the eye travels over many a fertile field and woody hillside, with the quaint little village of Inverkip nestling amidst the "tall ancestral trees" in the foreground.

Extensive parks of rich pasturage surround the mansion, and many a noble tree spreads abroad its giant branches, at once giving beauty to the landscape and shelter to the cattle as they lazily browse in the summer sunshine. A well-kept lawn, intersected by gravel walks and judiciously ornamented with graceful trees and clumps of shrubs, stretches out immediately in front of the house; while in close proximity to the mansion there is a neat little flower garden, kept bright during the summer with choice bedding plants. An ornamental stair leads from this up to the conservatory, which occupies a position adjoining the drawing-room, on the second storey. It is of handsome design, and is always kept bright and gay with a choice selection of foliage and flowering plants in season.

After an absence of twenty years it was with genuine pleasure that one day last September we found ourselves once more treading the weedless gravel of the drive that leads from the village of Inverkip towards the gardens. Once again we looked upon the erstwhile familiar scenes, reawakening within our memory many a half-forgotten incident of the bygone days. We were fortunate in finding Mr. Lunt at home, and had the pleasure of inspecting the gardens and hothouses under his escort. Mr. Lunt has had charge of these extensive and beautiful gardens for the long period of forty-five years (surely a record service), and has discharged the multitudinous duties devolving upon him to the entire satisfaction of his appreciative employers, and we were pleased to see the veteran of so many years' faithful service still hale and hearty, and looking fit for years to come.

On entering the garden we are confronted with the fruit houses—a handsome, substantial range of glass 442ft in length. The first house entered is devoted to the cultivation of Peaches and Nectarines. The trees are planted both at the back and front of the house; those on the front are trained on what is popularly called a drum trellis, thereby allowing a maximum of light and sunshine to reach the trees on the back wall. At the time of our visit the bulk of the fruit had been gathered, but we were informed the crop had been good and the quality first class—a statement which was fully borne out by the few remaining Nectarines which we saw, large, brightly-coloured specimens. Three houses in all are set apart for the growth of these luscious fruits, large quantities being annually required to supply the dessert table, especially Nectarines, which are specially favoured by Sir Michael.

The trees, which are models of good training, are all in excellent health, free from insect pests, and promising well for next year. In the early house the trees are on the front only and trained up the roof, the back wall being covered with two fine *Lapagerias*, a red and a white. The fine, strong growths and leathery dark green leaves indicate that the position and treatment accorded them are exactly to their liking, and as a recompense they annually yield an abundant supply of their beautifully



A Four-Flowered Tulip.

chaste flowers. The fruit had all been cut from the early Vines, but in the two later houses many fine bunches still remained.

Especially good were the Muscats, of which we observed a goodly number of excellent bunches, with large berries of a beautiful amber tint, despite the sunless season we had experienced. The majority of the Vines at Ardgowan are no youths, having been planted about forty years ago. Mr. Lunt is, however, bringing up young, vigorous canes from the base and gradually removing the old rods, so that, like the proverbial eagle, these Vines may be said to be renewing their youth. The Fig house, which occupies the westmost end of the range, is somewhat narrower in width than the rest of the range, the trees being planted on the back wall only. Two huge trees completely fill the space, and bear splendid crops of fruit. At the time of our visit the second crop was ripening, and we observed many luscious, tempting examples. Mr. Lunt remarked that he thought they were the finest second crop Figs he had had from these trees; the variety is Brown Turkey. Sandwiched in amongst the fruit houses are two plant houses—a greenhouse and a stove. The former was bright with a variety of flowering plants usually found in such houses; a number of large specimen *Camellias* were, however, specially noteworthy, all in robust health and beautifully trained. Amongst them we noticed a couple of nice shapely plants of that fine old sort, *C. reticulata*. In the stove were a nice batch of *Ixoras*, while foliage plants were well represented by well-grown highly coloured *Crotons*, *Dracenas*, *Caladiums*, &c.

Strawberries for forcing are grown in large quantities in pots, and fine healthy stuff they looked as they stood in long rows along the walk in front of the fruit range, and they will no doubt give a good account of themselves next spring. In the kitchen garden the usual vegetables are grown in large quantities to meet the heavy demands that are made upon this department. Specially fine we noticed a large breadth of Onions, sown as late as the beginning of April; yet, notwithstanding the shortness of the season, many fine samples were observed, quite equal to many that have been reared under glass and transplanted.

If we mistake not, Onions have been grown continuously on the same ground for at least a quarter of a century, whatever more. The appearance of this latest crop is such as would refute the theory advanced by some that it is suicidal policy to grow this useful vegetable year after year on the same ground.

Beetroot, too, was very fine, a large breadth, beautifully coloured, with not a single rogue being noticed among them. Brussels Sprouts were also well represented, promising a plentiful supply for winter. Strawberries, we were informed, had suffered

from the late spring frosts, but the deficiency in this valuable crop was amply supplied by a superabundant crop of Raspberries. Mr. Lunt had a word of commendation for that fine variety, "Superlative," a splendid cropper, with fine large berries. A few Gooseberries were still hanging on the bushes, the remnant of an abundant crop, and toward these the ubiquitous blackbirds were paying marked attention.

Passing out of the walled garden we come to a couple of ranges of nice useful span-roofed houses, devoted to the growth of various plants. In the first of these, which we entered, was a nice collection of Azaleas and greenhouse Rhododendrons, all in robust health, and bristling with flower buds. A nice little collection of Orchids in fine healthy condition was also noted. *Calanthes*, which are a speciality at Ardgowan, are grown in quantity, and a splendid lot of plants they were, just beginning to show their flower spikes. We have vivid remembrances still of the brilliant display these useful winter blooming plants made, associated with scarlet Poinsettias, in the long ago. Crotons, *Dracaenas*, *Pandanus*, &c., grown in small pots for table work filled another house, and clean, brightly coloured, useful stuff they were. Ferns, too, are largely grown, especially *Adiantums*, which are much in demand for decorative purposes. Growing in baskets we noted several fine *Davallias*, also the beautiful *Gymnogramma schizophylla*, handsome to look at, but of little utility. *Gloxinias* and hybrid *Streptocarpus* made bright the stages of another house, showing how admirably adapted these plants are for decorative purposes.

The next house we entered was entirely filled with the best and newest varieties of Zonal Pelargoniums in full bloom. Both single and double varieties were represented, making a gorgeous display, that might well make a Cannell or a Pearson green with envy.

A fine batch of Cucumbers growing in pots was next noted. These were just coming into bearing, and are to afford the winter's supply. Melons were just over; the crop, we were told, had been excellent, one of Sutton's new varieties having done splendidly. The name has escaped our memory, but Mr. Lunt considered it the finest variety he had ever grown; surely an excellent testimonial, coming, as it does, from one who has had such a lengthy experience. Tomatoes filled another house, Austin's Eclipse being a favourite, and, as seen at Ardgowan, it would be difficult to eclipse. The plants were loaded with large, handsome fruits, requiring a little sunshine to bring them to maturity.

This being the last of the houses, and as a heavy shower of rain was falling, we were perforce obliged to shelter for a little, and while doing so we naturally spoke of the bygone days, and those who were associated with us in these gardens then. If these lines should meet the eye of someone who has spent a term at Ardgowan under Mr. Lunt's superintendence, we can most heartily assure them that their old chief continues to take a most kindly interest in their welfare still, rejoicing to know of their success. On leaving our hospitable shelter we observed that a wall which was formerly devoted to the growth of Pears—which, however, never did satisfactorily—had undergone a change. The trees had been recently removed, and the space planted with fine varieties of Tea Roses. This will no doubt be a great improvement once the trees become established, giving a plentiful supply of Roses for house decoration, large quantities of cut flowers being in constant demand for this purpose.

There are many more things of interest which might be noted in these interesting gardens, where high culture and tidiness prevail on every hand; but we fear, Mr. Editor, we have already trespassed too much on your valuable space. We cannot, however, close these rambling notes without expressing our thanks to Mr. Lunt for his kindness and courtesy in thus enabling us to spend an enjoyable hour amidst familiar scenes, an hour which will long remain a pleasant recollection in the memory of—  
ALBYN.

#### South Africa.

The following extracts are from a letter from Pretoria, Transvaal:—"We have been having very warm weather lately, much warmer than we ever have it at home. The sun seems to be direct overhead, and so near that it almost scorches everything. One great peculiarity of this country is the clear atmosphere; things that seem about fifty yards away, on examination will prove to be nearer a mile. Mountains can be seen plainly at sixty and eighty miles on a clear day, and I believe much further than that. [Forty miles is about the usual distance at which one can see hills.—Ed.] South Africa, at least all I have seen of it in an eight-months sojourn in three of the Colonies, is very hilly, and bare of wood of any kind; in fact, the whole country, in my opinion, is as barren and dreary-looking a place as any one could wish for. This is a terrible country for thunderstorms, and we are about to have one to-night. The lightning is almost incessant, and the atmosphere is so stuffy one can hardly breathe; the thunder seems to shake the very ground.—Oct. 21, 1902."

## Societies.

### Royal Horticultural Society, Drill Hall, December 9th.

The last meeting of this Society for the year 1902 was a small one, owing largely to the very cold weather. Four nice collections of Apples were forwarded, and Messrs. Wells and Co., Limited, were strongly represented with Chrysanthemums. Cypripedium groups were noticeable. At the afternoon meeting nearly fifty new Fellows were elected. The new hall plans furnished a topic for criticism amongst members at this meeting.

#### Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair); with Messrs. James O'Brien, de B. Crawshaw, H. Ballantine, F. A. Rehder, Norman C. Cookson, H. T. Pitt, W. H. White, A. Hislop, F. W. Ashton, E. Hill, Jas. Douglas, J. W. Odell, F. J. Thorne, W. Boxall, W. H. Young, J. Charlesworth, J. Wilson Potter, T. W. Bond, H. Little, and J. G. Fowler.

W. E. Budgett, Esq., Henbury, Bristol, staged a group of Cypripediums in flower, and the plants were in a very vigorous state of health. Here was included *C. Leeanum giganteum*, *C. Leeanum Budgett's* variety, the latter's pouch being more protruding and of a lighter colour than in *giganteum*. A plant of *C. insigne* in a comparatively small pan bore nineteen flowers. Other fine varieties were *C. Swinburni magnificum*, *C. Leeanum Keeling's* var., with prettily mauve tinted dorsal sepal; *C. i. Essie Budgett*, and *C. i. The Queen*, amongst others. The latter is a very prettily coloured flower. A very bright display.

Messrs. J. Veitch and Sons, Limited, Chelsea, S.W., contributed a select group of various hybrid Orchids. *Laelio-Cattleya Semiramis* is both a graceful and richly coloured flower; *L.-c. x Hon. Mrs. Astor* is of a buff-tea colour, with a nicely shaded purple lip, a charming subject; *L.-c. x Omen*, with prettily acuminate segments, of a pale mauve-purple hue; *L.-c. x Coronis*, with deep cinnamon coloured sepals and petals, and reddish lip, together with various Cypripediums, particularly good being *C. x Aetæus* and *C. Euryades Langleyense*.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, had a small group, in which we noted *L.-c. Whateleyor*, of the *C. Iris* type, stout and interesting. The lip is very handsome—a velvety maroon. They had a finely flowered plant of *Dendrobium aureum*, and another of *Cymbidium Traeeyanum*. Their *Oncidium cheiroporum*, with five showy panicles, was decidedly good. Norman C. Cookson, Esq., sent some beautiful hybrid Cypripediums.

O. O. Wrigley, Esq. (grower, Mr. E. Rogers), The Gardens, Bridge Hall, Bury, had an exceedingly creditable collection of Cypripediums, bearing immense flowers of really fine colour; they were remarkable, too, for their floriferousness. *C. nitens magnificum* was superb, and the following were also above par: *Arthurianum*, *Antigone* (one of the *Godfroyæ* group), *Leeanum Clinkerberryanum*, *insigne Berryanum Sallieri*, *i. punctatum violaceum Euryades*, a large flower; and *i. Laura Kimball*. The group might contain about 150 to 160 plants, in 5in and 6in pots.

#### Floral Committee.

Present: J. Jennings, Esq. (in the chair); with Messrs. H. B. May, Geo. Nicholson, R. Dean, E. Molyneux, J. F. McLeod, James Hudson, W. Howe, Chas. Dixon, W. Bain, H. J. Cutbush, Chas. E. Pearson, H. J. Jones, R. C. Notcutt, Chas. E. Shea, W. P. Thomson, E. H. Jenkins, J. W. Fitt, C. Blick, Harry Turner, F. Page Roberts, and Chas. T. Druery.

Count Seilern (gardener, Mr. W. J. Prewett), Frensham Place, Farnham, contributed Chrysanthemums, including some excellent incurveds.

Messrs. H. Cannell and Sons, Swanley, Kent, were represented by a table of Zonal Pelargoniums in bouquets, these being in glasses. A large number of very excellent seedlings were included. We may name Lord Roberts, deep maroon; Duke of Norfolk, a lighter shade; Duchess of Marlborough, rose-salmon centre, white edge; Lady Laurier, rich salmon-red; Mrs. Brown Potter, deep rosy cerise; Mary Beaton, pure white; and The Sirdar, scarlet. Their incurved Chrysanthemum *Snowdrift* was shown in good form. Messrs. Barr and Sons, King Street, Covent Garden, W.C., sent Barr's Extra Early White Roman Hyacinths; also Rosy Gem variety, and *Mitchella repens*, a hardy little trailer with crimson-scarlet berries.

Messrs. Wells and Co., Earlswood Nurseries, Redhill, Surrey, made quite a wonderful display of Chrysanthemums, filling more than half a table length of the hall. We need not name the exhibition flowers here, but would refer to the following decorative sorts: Singles: Mrs. D. B. Crane, Crimson Gem, Herbert Henderson, Ellen Smales, Kate Williams, Dorothy, Yellow Jane Improved, Yellow Giant, Golden Star, Nora, Mrs. E. Brigg, Lady



Windsor, Framfield Beauty, and Pretty. Of the thread-petalled sorts there were Mrs. J. Carter, Novelty, White Jitseyetric, Sam Caswell, and Mrs. W. Butters. This group was quite one of the leading features of the show.

Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, staged foliage plants, Ferns, and Carnations. Of the latter there were Prince of Wales, Mrs. Moore, Resplendent, Mrs. T. W. Lawson, and Monarch. A. Seth Smith, Esq., Silvermere, Cobham (gardener, Mr. J. Quartermain), sent a basket of *Freesia refracta alba*; these were delicately scented.

Messrs. W. Cutbush and Son, Highgate, London, N., sent a wonderfully bright collection of tree Carnations. The size and colour of them was exceedingly good. We may again name Sir Hector MacDonald, Lady de Ramsey, America, Mrs. S. J. Brookes, and Gov. Roosevelt. Messrs. Thos. Rochford and Sons, Turnford Hall Nurseries, Broxbourne, contributed a group of very well grown Begonias Gloire de Lorraine and Turnford Hall. From Messrs. J. Veitch and Sons, Limited, Chelsea, came winter flowering Begonias, and the pretty *Jacobinia chrysostephana*, which we figure this week. Of the Begonias, Winter Cheer was well shown, together with Julius, Ensign, and Agatha. Messrs. Wm. Bull and Sons, 536, King's Road, Chelsea, contributed a number of huge *Encephalartos*, *Zamias*, and *Ceratozamias*. They had also *Hydrangea speciosa nivalis*.

Miss Easterbrook, Fawkham, Kent, had a beautiful decorated basket of single and thread-petalled white Chrysanthemums.

#### Fruit and Vegetable Committee.

Present: H. Balderson, Esq. (in the chair); with Messrs. Jos. Cheal, W. Bates, S. Mortimer, Alex. Dean, Edwin Beckett, Wm. Fyfe, Horace J. Wright, Geo. Kelf, P. C. M. Veitch, H. Somers Rivers, H. Markham, J. Jaques, F. Q. Lane, Geo. Wythes, James H. Veitch, W. Poupert, and Henry Esling.

The Hon. C. Harbord (gardener, Mr. Allan), The Gardens, Gunton Park, Norwich, sent a fine collection of Norfolk Beauty Apple, the fruits large, deeply coloured, and clean.

Messrs. T. Rivers and Son, Sawbridgeworth, sent twenty-one baskets of fruits, some of these being orchard-house samples. Emperor Alexander, Belle de Pontoise, King of Tomkins County, Melon Apple, Cox's Orange Pippin, and Peasgood's Nonesuch, with Gloria Mundi, Gascoigne's Scarlet, and Annie Elizabeth, were each very handsome.

R. W. Whiting, Esq., from Credenhill, Hereford, sent Apples, among them being the varieties James Grieve, Golden Spire, Cox's Orange Pippin, Egremont Russet, Golden Noble, King of the Pippins, Newton Wonder, Worcester Pearmain, and Lane's Prince Albert.

Messrs. J. Cheal and Sons, Lowfield Nurseries, Crawley, had a very large collection of Apples, and we noted excellent samples of Paroquet (recent), Newton Wonder, Lord Derby, Golden Spire, Crawley Reinette, Lane's Prince Albert, Wyken Pippin, and Atalanta, together with some Pears.

Apples were staged in tasteful form by Messrs. H. Cannell and Sons, of Swanley. Their Peasgood's Nonesuch was good; so, too, their King of the Pippins, Cellini, Dutch Mignonne, Beauty of Kent, Bramley's Seedling, Worcester Pearmain, Annie Elizabeth, Alfriston, Blenheim Orange, Lady Henniker, Lane's Prince Albert, and New Hawthornden, all of which were from field-grown trees.

#### Awards of Merit.

*Boucardia, King of Scarlets* (John Robson). A variety remarkable for the strength of its eymose clusters and scarlet-crimson. (Award of Merit.) From Rowden Nurseries, Altrincham.

*Primula obconica semi-plena* (Sir T. Lawrence, Bart.). A mauve-purple coloured, semi-double variety. Award of Merit.

An apple from Mr. H. H. Raschen, Sidcup, Kent, received an Award of Merit, but none of the fruits were to be found.

#### Medals.

FLORAL COMMITTEE.—Silver-gilt Banksian, for group of winter flowering Begonias to Messrs. J. Veitch and Sons, Chelsea. Silver Flora, for Chrysanthemums to Messrs. Wells and Co., Redhill. Silver Banksian, for Begonias to Messrs. T. Rochford and Sons, Broxbourne; for Carnations to Mr. H. B. May, Upper Edmonton; for Zonal Pelargoniums to Messrs. Cannell and Sons, Swanley. Bronze Flora, for cut Chrysanthemums to Count Seilern, Farnham.

ORCHID COMMITTEE.—Silver Flora, for group of Orchids to W. E. Budgett, Esq., Henbury, near Bristol; and to Messrs. J. Veitch and Sons, Chelsea. Vote of Thanks to Messrs. Hugh Low and Co., Enfield. Silver-gilt Flora for group, and Cultural Commendation for *Cypripedium Arthurianum*, to O. O. Wrigley, Esq., Bridge Hall, Bury.

FRUIT COMMITTEE.—Silver Knightian to Messrs. Cannell and Sons, Swanley, Kent. Silver-gilt Knightian to Messrs. Thos. Rivers and Son, Sawbridgeworth, Herts; to Col. Hon. C. Harbord, Hereford. Silver to R. W. Whiting, Esq., Norwich.

### Potatoes at the Cattle and Root Show, Birmingham.

Considering the exigencies of the season, Potatoes were extremely well shown at this show, whilst roots, such as Mangolds and Turnips, were even larger; but there was a tendency to sacrifice quality to size, doubtless occasioned by the extraordinary prevalence of dull and rainy weather during the growing season. In the trade exhibits Messrs. Webb and Sons, Wordsley, Stourbridge, had, as usual, a grand representation of Mangolds, Swedes, and Turnips. With new Potatoes not yet offered for commerce, Mr. F. Williams, Thornbury, Gloucestershire, was placed first with a variety which is appropriately named after the year of its birth, "1902." It is a very handsome white, nearly round, with a fine skin. The second prize was annexed by Mr. G. S. Willes, Farnborough, with another appropriately named variety, Coronation. This also is a handsome and not too large white, round tuber of ideal size. The veteran Satisfaction, as usual, was prominent in the competition classes, and its compeer, Mr. Breese, occupied a similar position. Appended is a list of a few of the principal prizetakers.

For twelve varieties, distinct, that champion exhibitor, Mr. D. H. Wells, Tysoe, Kington (who had twenty-three entries), annexed the first prize with fine examples of New Majestic, a white round, of perfect shape, Reading Russet, Progress, Lord Tennyson, Supreme, Edgecote Purple, Goldfinder, Mr. Breese, Satisfaction, The Dean, Empire, and Purple Perfection. Second, Mr. B. Parker, Scotforth, Lancaster, with a somewhat smaller lot as regards size of tuber. For six varieties, Mr. Wells again asserted his superiority by annexing the first and third honours, whilst the second prize fell to the Duke of Portland, Welbeck Abbey. The first prize collection contained Mr. Breese, Progress, Lord Tennyson, Goldfinder, Edgeworth Seedling, and Satisfaction; a capital lot. For four varieties, two white and two coloured, Mr. Wells was again to the fore with Lord Tennyson, Satisfaction, Mr. Breese, and Motor, the latter a handsome medium-sized white variety of Up-to-Date contour. The second prize fell to Mr. F. Williams, Thornbury; third, Mr. D. H. Wells. For four varieties most suitable for field or farm culture, Mr. Wells was the victor with very good specimens of Ideal, Motor, Reading Giant, and Satisfaction; also second with Reading Giant, Satisfaction, Sutton's Abundance, and Commonwealth; third, Mr. Thomas Penn, Worminghall, Thame.

In the class for two varieties, long or kidney shaped, Mr. B. Parker scored with Satisfaction and Lord Roberts, a long, white kidney; second, Mr. F. Williams, with Mr. Breese and Ideal; third, Mr. D. H. Wells. For two round varieties, Mr. F. Williams won with Pink Perfection and Satisfaction; second, Mr. B. Parker with Satisfaction and General Buller, the latter a shapely, medium-sized white variety; third, Mr. Thomas Penn. For one long or kidney-shaped variety, Mr. Wells was to the front with a fine dish of Satisfaction; second, Mr. F. Williams with a handsome dish of Mr. Breese. For one round variety, Mr. Thomas Penn was first with Webbs' Goldfinder; and Mr. F. Williams second with Satisfaction. For the most handsome dish, any variety, Mr. F. Williams was adjudged the first prize with Satisfaction; and Mr. S. T. Parker, Scotforth, second for Daniels' Sensation, a medium-sized round white. For the best new variety not yet offered in commerce (twelve tubers) Mr. F. Williams triumphed with "1902," already described, and Mr. E. S. Willes, Farnborough, for Coronation. There were several other new varieties, apparently more or less worthy of attention.

### Liverpool Horticultural.

On Saturday evening, the 6th inst., a large attendance of members met together to hear Mr. Francis Ker's (Aigburth Nurseries) discourse on "Bulbs and Plants for Early Forcing." This gentleman treated the subject in a masterly manner, emphasising the importance of having good plants, which have been well grown and ripened the previous summer. He advocated, in the case of early Tulips, that they should be forced under stages, and covered with mats, and also laid great stress upon the selection of suitable varieties. His selection was acknowledged to be a good one, and included the favourite sorts of Tulips, Hyacinths, &c. Other suitable plants to keep up a regular and continuous supply were Freesias, Narcissus, Lily of the Valley, Spiræas, especially the new shrubby variety Anthony Waterer; Azaleas, mollis and indica; French Lilacs, Tea Roses, Deutzias, Liliums, Hydrangeas, Wistaria sinensis, and many other subjects. A good discussion followed, in which Messrs. B. Ashton, Sherry, Mercer, and Haynes took a leading part. Lily of the Valley was the theme for the exchange of various ideas, and it was acknowledged that sphagnum moss was the most suitable material for covering these crowns; and also that retarded crowns be grown, some of the members having flowered these in a period of eight days. Mr. Haynes, Birkenhead, brought for inspection some Amaryllis bulbs which had been grown outside, and which caused considerable comment. A vote of thanks to Mr. Ker for his admirable paper and Mr. Foster for presiding terminated the meeting.—J. S.

### Birmingham Gardeners' Association.

The usual fortnightly meeting was held on the 1st inst. with Mr. Walter Jones (the vice-chairman of the Association) presiding. A short essay on "Cool House, Intermediate, and Stove Orchids," by Mr. H. A. Burberry, late Orchid grower to the Right Hon. Joseph Chamberlain, Highbury, was read. The essayist's practical remarks and advice were much appreciated, and also enhanced by a series of lantern slide representations of Orchids grown by Mr. G. H. Thompson, Grove House, Walsall. The photographs had been executed by Mr. Thompson's son. At the conclusion of an ensuing interesting discussion, a hearty vote of thanks, conjointly to Messrs. Burberry and Thompson, was proposed by Mr. W. Gardiner and seconded by Mr. George Stacey, and carried unanimously. Mr. G. Stacey was awarded a Certificate of Merit for a collection of medium-sized, bright, and well-coloured Apples.

### Metropolitan Public Gardens Association.

**OPEN SPACES.**—At the monthly meeting of the Metropolitan Public Gardens Association, held at 83, Lancaster Gate, W., Sir William Vincent, Bart., vice-chairman, presiding, it was stated that the laying out of the ground at Southfields was almost finished, and that the tree-planting work in Shoreditch, Islington, and Barking, as arranged at the last meeting, was being taken in hand. Complaints were received as to renewed thinning operations at Burnham Beeches, which were alleged to be unnecessary and of a detrimental character, and it was decided to communicate with the City Corporation on the subject. It was also decided to take part in a deputation to the London County Council to protest against a proposal to alienate the house and upper part of the ground at Golder's Hill for the purpose of a convalescent home, as being quite contrary to the scheme under which contributions were obtained from the public, and to the Act by which the property was placed in the Council's hands. It was agreed to advocate the acquisition of some fields, about nine acres in extent, adjoining a picturesque part of Hampstead Heath, which would be injuriously affected if they were built over, and to take steps to oppose a Bill to be introduced next Session seeking to override the Disused Burial Grounds Act in order to convert a disused burial ground in Dorset Street into a building site. Progress was reported with regard to the Hainault Forest scheme, and the application which the Open Space Societies had recently made to the London County Council for a grant of £10,000 thereto. The subject of the Richmond Hill view was also mentioned in connection with the alleged undertaking given by Sir J. Whittaker Ellis to restrict building operations on certain property owned by him comprised in the view. It was reported that the Duke of York's School, Chelsea, was likely to

be removed from its present position, and it was agreed to make endeavours to prevent at least that portion of the site which contains fine trees from falling into the hands of the builder.

### R.H.S. of Perthshire.

The annual general meeting of the Royal Horticultural Society of Perthshire was held at Perth on Saturday afternoon. Mr. Henry Coates, Pitcullen, the president, occupied the chair, and there was a good attendance. The annual report and financial statement was submitted, from which it appeared that the society had suffered considerable financial loss through the railway accident on the Perth and Edinburgh line at Hilton Junction, whereby the side shows belonging to Mr. White were so much damaged that they were unable to be forward at the annual exhibition. As a result of the want of these attractions, the drawings had suffered to a large extent, but, notwithstanding, the society had a balance on the right side. The following office-bearers were elected: President, Mr. Henry Coates, Pitcullen; vice-presidents, Mr. Rufus D. Pullar, Brahan; Lord Provost Love; practical vice-president, Mr. Stenning, The Gardens, Brahan; secretary and treasurer, Mr. A. W. Brown; and a directorate of fifteen, composed of gardeners, amateurs, and nurserymen.

### Ipswich Mutual Improvement.

At the last meeting of this society, on December 4, Mr. W. Close, Holy Wells Gardens, the energetic secretary of the society, read a most valuable paper on "Tree and Malmaison Carnations." Mr. Close devoted most attention to the Tree Carnations, which he said were a class of plants rapidly coming to the front. To ensure strong plants for winter flowering it was essential that an early start should be made. Cuttings of short-jointed side growths should be inserted in January in pots of sandy soil, which should be placed in a propagating frame having bottom heat. When rooted, pot off in 54's, stopping the plants when 5in high. Shift into flowering pots (32's) in June, and stand the plants in an open situation, stopping the growths once or twice during the summer. House the plants in September in a light greenhouse, affording plenty of air at all times, except during severe frost. The essayist also gave minute cultural directions for Malmaisons, and then proceeded to refer to the best varieties in each section. He had a fine collection of cut flowers of Tree Carnations on view, some grown by himself, and others supplied by Messrs. Cutbush and Son, Highgate. Amongst others, we noted nice flowers of S. J. Brooks (good white), Viscount Kitchener, Harry Fenn, Shazada, Novelty, Lord de Ramsey, Hector Macdonald, and America. A good discussion followed, which was terminated by Mr. Morgan proposing a hearty vote of thanks to the essayist, and to Messrs. Cutbush for their exhibit.—E. C.

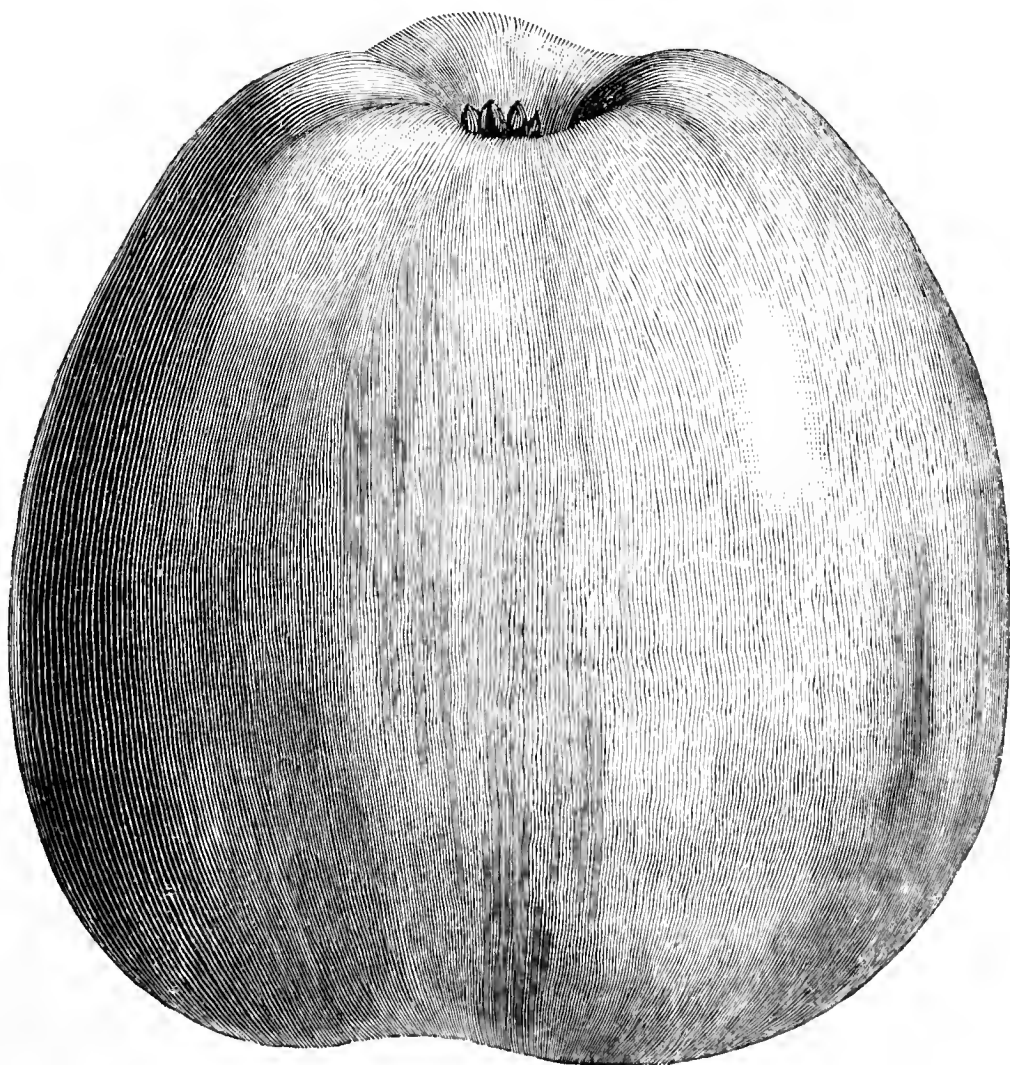
## Apple, Royal Late Cooking.

At the meeting of the Royal Horticultural Society on January 14th, 1896, the Fruit Committee granted an award of merit for this Apple. It is one of the seedlings which Mr. Powell raised at Frogmore, but has been long established as a favourite late cooking variety in the Royal household. The fruits exhibited were remarkably fine as the produce of a large standard tree, and were thus not assisted by thinning and feeding as many fruits are, and should be, for developing their fullest size and beauty for exhibition, and, in fact, for market purposes. The best fruit of all kinds pays the best, and attention to the points in culture indicated acts in the same beneficial way in the case of Apples, Pears, and Plums as in Grapes. The fruits of Royal Late Cooking exhibited were what may be termed good ordinary samples. They had some resemblance to Lord Derby, but were more symmetrical, firmer, and heavier. Mr. Bunyard thinks he can detect a trace of Tower of Glamis and Alfriston in the Royal Late Cooking; but, be that as it may, the fruits are fine. The illustration represents a typical example of the variety.

### TRADE NOTE.

**Ware's Nurseries, Feltham and Bexley Heath.**

Mr. Geo. Pike informs us that he has acquired the above business and nurseries, as, and from August 31st, 1902, and that the business will be carried on by a new Company, under the style Thomas S. Ware (1902), Ltd., with Mr. Pike as managing director.



Apple, Royal Late Cooking.



### Beckenham Horticultural.

On Friday, December 5, E. Lovett, Esq., West Burton House, Addiscombe, gave a most interesting lecture on "Insect-feeding Birds, and how to Encourage Them." A good gathering of members and friends of the society, which included some ladies, was presided over by W. Groves, Esq., Grove House, Shortlands, a gentleman who, by the way, for a great number of years has studied bird life, &c. The lecturer particularly emphasised the fact that he did not advocate the killing of anything, though in speaking of the house-sparrow he agreed that we had too much of him, and suggested that food should not be thrown out as is usually done in bad weather, but rather let the sparrow shift for himself, and study the wants of the insect-feeders by suspending from branches of trees, by a string, pieces of fat meat, suet, bones, &c. (not ham bones). The lecturer pointed out that the sparrow could not get a foothold on this suspended food, whereas the tits, &c., could do so. It was suggested by the lecturer that stacks of faggots should be built at convenient spots in fruit orchards to encourage the nesting of the insect-feeders. Suitable boxes also were advised (one on view), and the steps to be taken to frustrate the efforts of cats to reach them. At the close the chairman made some instructive comments on the lecture. Several questions were asked, after which hearty votes of thanks were accorded the lecturer and chairman. It was understood from Mr. Lovett that his views on the bird question will be printed and published, so we may be able to read him in extenso. The L.C.C. have carried out with success suggestions made by Mr. Lovett.—T. C.

### Cardiff Gardeners' Association.

The fifth annual general visit to the Central Free Library took place on Tuesday, December 2, Mr. A. Pettigrew, F.R.H.S., in the chair. A good muster assembled, and were received by Mr. John Ballinger, the chief librarian. The object was to view the large collection of books relating to horticulture, and noticeable again were numerous additions since the last visit. One word may be said, and that the librarian never misses an opportunity of securing a good thing when once he thinks it will be of some value to the public, and the chief and most considerate fact is, that it is the most valuable is secured, knowing full well that they are out of reach of the average gardener and amateur. Three very costly works have been purchased quite recently, viz., "Humming Birds" and "British Birds," both dealing in reference largely with the Orchids, showing how skilfully the methods of fertilisation are carried out. Thirdly, the "Reichenbachia" has been much sought after since its introduction. After a couple of pleasant hours had been spent, the chairman, addressing the meeting, referred to the many chances the young gardener of to-day had against his predecessors of some thirty years ago. A very hearty vote of thanks was accorded Mr. Ballinger for his kindness in being instrumental in obtaining the invaluable books for the benefit of gardeners and amateurs generally. In replying, this gentleman spoke at some length upon some of the rarest and most expensive works, and said he felt keenly the appreciation of the members by the way the books had been taken up in the library between the times of each visit. A very cordial vote of thanks was given Mr. Pettigrew for presiding.—J. JULIAN.

### Young Gardeners' Domain.

#### Maximus in minimis.

The Napoleons of horticulture were not born great. Even under its commercial aspect the founders of great firms, whose mantles have descended perhaps to the second or third generation, often started in the humblest manner to win a name and fame as providers for the great gardening world. Most of the latter, indeed, were private gardeners, whose modest capital, enabling them to secure a foothold on the great commercial ladder, was gleaned by thrift in the first field of their labours. There they stand, however, in person, or in memory, towering far above their fellows, pointing the beacon-finger of example to all who aspire. It is easier, certainly, to see the heights they have attained than to follow a course which, beginning on obscure lines, only opened into the broad road of success when near the summit. "Oh! it's grand to be on top," some youthful aspirant will say. It is, my boy: remember the Marshals of France who, as private soldiers, carried their bâtons in their knapsacks. Remember, too, our text, *Maximus in Minimis* (great in little things): surely a grand motto for lads starting in life. Simple words, truly, but pregnant with persistent perseverance, stern application, rigidity of character, power to attain and maintain, full recognition of the grandeur of duty, the resolve to do, and the will to do it.

There is a great wild cry about bad bothies, long hours, and low wages. Our boys are told that they want baths, reading-rooms, recreation grounds, cricket pitches, ping-pong perhaps, and what not. Naturally they believe it, for are they not good

things in their way? In their way, I grant you; but none of them had aught to do with elevating the Napoleons of horticulture. The Fates forbid that any disparagement of betterment in the bothy be suspected; none is intended. For such good things, and others of that ilk, as aids to elevation, the writer rests under the calm neutrality of indifference. The absence of them provides no excuse for failures in life. Let our boys enjoy the bothy bath if—if they can get it, and when taking up positions as head gardeners they will, doubtless, soon get over the want of it where such luxuries (necessities in the bothy) are practically unknown. One gardener's house in England is certainly known to possess its bath; possibly another may be so provided, but as head gardeners are not prone to agitate for themselves, the "Missus" wash-tub will, doubtless, still do duty for a weekly ablution subsequent to the sousing of the olive branches.

The cause of the young fellows is being bravely championed by old boys in the most unselfish manner; so much so that, at first sight, it appears more creditable to their hearts than to their heads. Where is the young gardener who could but think that the change from rich, luxurious lodgings, recently depicted as furnished by a modern bothy, to the poor accommodation of many a head gardener's cottage—house, if you will so miscall it—is a step on the down grade? There is no wish, however, to trench on old boys' ground, provided they do cock up the young fellows with imaginary grievances. One thing by the way, viz., those who plan, or who offer prizes for plans of up-to-date bothies, seem to have overlooked the chief factor in their erection; that is, their suitability to the position, and, I take it, the bothy should be—must be—subordinate to the garden, unless placed outside of it, in which place the grounds have to be considered. There are many gardens in which a two-storied building would be totally unsuitable by its obtrusiveness, and the writer spent four years in one palatial erection, sadly missing that homeliness and privacy which the old-fashioned bothy, with all its faults, gave. Things are not always what they seem, and about our lodgings there were two opinions, one held by us bothyites, as we bolted like rabbits by the back door when visitors were shown in by the elegant front entrance, with its Gothic porch and spotless tiles, specially reserved for them, and were loud in their praises of what they saw. To the young fellow who has the real gardening grit, whose course is well planned and undeviatingly pursued, neither bad bothies, nor good bothies, hard work, or poor pay, the want of help, or absence of pity, will prevent him reaching his goal. All such things to him are little things, contemptible little things, to which our text does not apply, for there is nothing great in them or ever will be.

All unconsciously these thoughts have strayed to the bothy, running the writer from the text, but that cradle of the gardening race must not monopolise; rather is it in the common round, the daily task of gardeners launched on the ocean of life that one may note how great some men are in little things, and how others treat them with supreme contempt. There is no better field of observation than that afforded by a flower show where the two types stand out conspicuous under the glare of competition; the one calm, methodical, and dignified, the other all flurry, flutter, and fuss. In the coming Chrysanthemum shows may be found excellent illustrations to our text, and a critical eye can focus retrospectively the full career of the winner from the cutting to the cup. A hundred trifles have been grasped in co-relation to the main ethics of sound culture, culminating in the last dainty touches of a deft hand to the beloved blooms. In these days of keen competition by great growers there may be, really, but little or no difference in pots, soil, position; or feeding beyond that which constitutes greatness in little things, and so on with the Goliaths of Grapedom, the Princes of plant culture, and all the attributes which make a man stand out among his fellow-men, the more conspicuous by his unostentatious manner, and a certain air *Je ne sais quoi*, but emphasising how good, yea, even noble, it is to be great in little things.

*Maximus in Minimis.* By its means men in obscure positions, with but small and ordinary gardens under their care and keep, gradually, perhaps unconsciously, place themselves and their work on a pinnacle of fame in the gardening world. Doubtless, the bulk of British gardeners do very well, performing their work creditably, and doing what they are paid for. They, of course, grumble more or less, but are really very happy withal; yet now and again one good man amongst this mass of good men cannot rest content with doing very well when he feels that he can do better. It is not for him, however, to march free and easy on a Royal road to eminence. In the by-paths he is to be found ever advancing, ever seizing every opportunity to learn in labouring on to a desired, but always receding, goal, for 'tis given to no man to reach finality in gardening, but 'tis the prerogative of the gifted few to better understand that benevolent yet capricious mistress, Nature. To them she reveals her little things which, in the aggregate, are the secrets of success. Nature, herself, is great in little things; the pupils she loves could not be otherwise.—A. N. OLDMEAD.



### Hardy Fruit Garder.

**WINTER PRUNING OF FRUIT TREES.**—The winter season affords the best opportunity for examining fruit trees in general and cutting out or shortening back superfluous wood. The main object of pruning must be to promote a fruitful habit, and this can only be done by well balancing the growth, and concentrating the energy of the trees in the production of wood, which shall tend in due proportion to form fruit buds as well as wood buds. Winter pruning is one of the important means by which fruitfulness is brought about, but it may, if abused, be also the means of rendering trees unfruitful. In the case of restricted trees, winter pruning is the completion of a method which was begun in summer. When winter pruning only is adopted in the management of formally trained specimens fruitful results are not always so certain. For free growing trees winter pruning usually suffices to maintain them properly fruitful, because there is not, or should not be, the hard cutting back, but the simple thinning out of branches.

**RESTRICTED FRUIT TREES.**—A tree originated with a very short stem, from which spring a number of branches, each of which is a separate or independent cordon, is termed a trained bush. The main thing is not to crowd these separate branches too closely together, or, if they are crowded, the winter pruning season should be taken advantage of to thin them out to a distance not less than a foot from each other. Both Apples and Pears are grown in this form, and prove profitable. The winter pruning consists in shortening the current season's shoots, which at this season ought not to be their full length, but have undergone the process of summer pruning. Whether the latter treatment has been accorded them or not, prune now to two or three buds, these eventually forming spurs. Aged trees may require further treatment in the shape of reducing the length of elongated, and thinning out weakly or crowded spurs. Young trees in the course of formation have the leaders shortened one-third of the present season's growth. In fully formed branches the same as side shoots.

**OPEN BUSHES.**—These are usually free growing trees, not trained in a formal manner, but allowed to extend in a natural way, and regulated by the usual process of keeping the branches and growths thinly disposed. Cross branches may be cut out and the centres left open. As a rule, they are encouraged to form natural spurs rather than artificial by not practising any shortening. The thin disposal of the branches so admits light and air that the trees readily do this and continue fruitful. When it is necessary to curtail the size of the bush in any way, it is best to adopt thinning out, and manage the trees more like the head of a standard, which they resemble in most respects, except length of main stems below the branches.

**PYRAMIDS.**—Pyramid trees, chiefly Apples and Pears, are useful forms for restricted spaces and small gardens. The branches are more or less originated horizontally from a central stem all round the trees, the lower ones being the longest. They are not necessarily restricted to a single cordon branch, but may fork, though they should not crowd. A considerable amount of pruning is necessary in order to suppress superfluous wood and keep them fruitful and shapely. Root-pruning periodically is a great help to them, as it encourages fibrous rooting and discourages strong growths. Summer pruning is imperative, and the winter practice must be to shorten these to one or two buds. Old established pyramids which have become crowded require, first of all, the thinning out of branches, then spur growths, which must also be reduced if too long.

**HORIZONTALLY TRAINED.**—Pears are best adapted for this method of training mainly on walls. The great mistake is frequently made of allowing the branches to be crowded. Also, when there are elongated spur growths, and these, too, are thickly placed, the trees are, or shortly will be, unfruitful. Thin the branches to not less than a foot apart. When there are any signs of superabundant growth there must be root-pruning to check it. The current year's shoots, which should be summer pruned, are often left at full length until winter. This is not good practice, as strong growths are almost certain to follow instead of fruit buds. Prune to two buds and look over the trees to see whether there are any weakly parts which may be dispensed with.

**STANDARDS.**—Standards are best grown on the free extension principle, giving each tree ample room to grow, when the pruning will resolve itself into the removal at various times of crowded branches. Those that cross one another, or crowd the

interior, are best cut out, always at their union with larger branches. Maintain, also, symmetrical and shapely heads by judicious pruning.

**CORDONS.**—To maintain cordons in a fruitful, well balanced condition, the summer pruning must not be neglected, and root-pruning should take place when too strong roots are produced. The winter pruning consists in pruning the shortened current year's shoots to one or two buds, these being in a fair way to become fruit buds. It is desirable to keep the fruiting spurs as near the main stem as possible; therefore, when in old cordons these become elongated, it is desirable to gradually shorten them back.—E. D. S.

### Fruit Forcing.

**CUCUMBERS.**—The weather, dull and foggy, has not been in favour of winter fruiterers, and the plants have suffered in consequence. Use warm soil, sweet, and not very wet, for earthing over the roots as they show at the sides of the ridges or hillocks. A few sweetened horse droppings spread on the surface, and a little superphosphate and sulphate of potash, mixed with soot, sprinkled on them, will attract the roots and afford nourishment to them when watered. This is preferable to liquid manure. Unless the plants are growing in limited borders, boxes, or pots, copious supplies will be necessary. Always apply it weak and tepid, and not too often. Sufficient moisture will be secured by damping the floor and walls in the morning and afternoon of fine days, but avoid excessive moisture, and do not supply water to the roots till the soil is becoming dry, then afford a thorough supply.

Look over the plants at least once a week for stopping, removing bad leaves, thinning as required, but pinching and thinning will not be required to a great extent, yet both must be attended to, as crowding is a great evil in the growth of winter Cucumbers. Overcropping is a still greater malpractice, and allowing the fruits to hang needlessly after they attain a size fit for cutting serves only to weaken the plants, and prevent other and younger fruits from swelling, but when large enough the fruits keep several days if the ends are inserted in saucers of water in a place safe from frost. Ill-shaped and superfluous fruit should be removed as they appear, and tendrils and staminate blossoms answer no useful purpose; therefore, remove them. Sometimes, however, it is necessary to fertilise the pistillate flowers to make sure of the fruit swelling, and though this may give a "knobby" fruit, it is better than none at all. Fertilisation, however, is seldom necessary for healthy plants raised from fresh seeds.

**PEACHES AND NECTARINES: EARLIEST HOUSE.**—To have ripe fruit in May of the standard forcing varieties, such as Hale's Early, Stirling Castle, Dymond, Royal George, and Grosse Mignonne Peaches, Early Rivers, Lord Napier, Elruge (some growers prefer Stanwick Elruge), and Humboldt Nectarines, there must not be any further delay in putting on the roof lights and closing the house. The very early Peaches, such as Alexander, Waterloo, and Early Louise, with Advance and Cardinal Nectarines started at the same time, will afford fruit a month earlier under a similarity of forcing conditions; indeed, they may be grown so as to produce ripe fruit in about thirteen weeks from starting, the buds being then well advanced in swelling, as early forced trees usually are, by what is known as "hard forcing." Ripe Peaches and Nectarines in late March and during April bring long prices, and though there are successes the failures are not unfrequent. Growing a few trees in pots is well worth while, as both at table and in the market such very early fruits are highly prized.

Trees started at an early date in previous years swell their buds promptly without much excitement from artificial heat, but those forced for the first time are slower in starting into flower. These must not be hurried, and with the buds swelling and advancing for flowering the atmosphere must not be kept very close, as it is important that the blossoms advance steadily and have time to develop flowers perfect in all their parts. Where the atmosphere is kept close and too moist the blossoms are drawn and weak if the temperature is too high; if low, little progress is made, and the fructifying organs are stunted and effete. Admit a little air constantly at the top of the house, and above 50deg it should be increased correspondingly with the temperature, but not allowing it to decline below 50deg in the daytime, sufficient artificial heat being maintained for that purpose, and with sun heat an advance may be allowed to 65deg, closing for the day before the temperature has receded to 50deg. A temperature of 40deg to 45deg is ample at night, and in mild weather 50deg.

When the flowers are advanced so that the anthers are showing, cease syringing, but afford a moderate amount of air moisture by damping the borders, paths, and walls in the morning and early afternoon of fine days. Avoid a close, stagnant atmosphere at any time, but especially at night with a high temperature. Examine the inside border, making sure that there is no deficiency of moisture. If necessary, afford a copious supply of water or liquid manure. The surface soil is often deceptive,



being kept moist by syringing: therefore, supply enough to moisten the soil through to the drainage, for surface sprinkling does very little good.

Trees often have very weakly blossoms and fail to set in consequence of water being given at the tops instead of to the roots. If there be a superabundance of blossom buds remove those on the under side of the shoots by drawing a gloved hand the reverse way of the growths. This will materially assist the swelling of the remaining buds. If there are any traces of aphides fumigate or vapourise the house on two or three consecutive evenings before the trees are much advanced in colour, always before the petals unfold, and the atmosphere must be dry, or the moisture will be condensed on the cooler surfaces of the flowers, and they will be discoloured or injured.

**SECOND EARLY FORCED HOUSE.**—If the trees are very early varieties, as Alexander, Waterloo, and Early Louise Peaches, with Cardinal and Précoce de Croncels Nectarines, ripe fruit may be had at the end of April or early in May by starting at the new year, but if the trees are second early or midseason varieties, such as Hale's Early, Early Alfred, Dr. Hogg, Rivers' Early York, A Bee, Stirling Castle, Dymond, Royal George, Grosse Mignonne, Crimson Galande, Noblesse, or Alexandra Peaches, Early Rivers, Lord Napier, Rivers' Early Orange, Stanwick Elruge, Elruge, Humboldt, Dryden, Violette Hâtive, or Pine-apple Nectarines, the fruit will not ripen until May is well advanced and during June. This must be taken into consideration by growers. In either case, and the trees not having been forced before, the house should be closed at once, fire heat only being used to exclude frost, the trees being sprinkled occasionally, or on fine days in the morning and afternoon, allowing time for them to become fairly dry before night. Keeping the trees constantly dripping with water, especially at night, enfeebles the blossoms, and is provocative of wood bud rather than blossom bud development. Do not allow the temperature to exceed 50deg in the daytime without full ventilation. Trees previously forced will not need the preparatory treatment, but start readily at the accustomed time. Supply water or liquid manure to inside borders, and protect outside with a few inches thickness of leaves and litter on top to keep them from blowing about.

**SUCCESSION HOUSES.**—Where the roof lights are moveable it is much the better plan to remove them, and expose the trees to the elements for the winter. This is inimical to many insects, and the trees are insured rest and thorough moistening of the border. Trees with thoroughly ripe wood are never injured by the severest weather. Even the latest and unheated houses are best treated in the manner described, often having the effect of causing trees to retain their buds, which cast them under fixed roofs, and the blossoms are generally finer than on the trees that are kept constantly evaporating from the young wood through the time they are at rest under fixed roofs, or where they are subjected to alternating rests and excitements where plants are grown in the house. The fogs and damps of winter, with the drenching rains and snow, suit Peaches on well drained soil, the trees being invigorated and the soil enriched. If the houses have fixed roof lights, ventilate to the fullest extent in all but very severe weather. Proceed with the pruning, bringing matters in respect of cleaning the house and trees to as speedy a conclusion as possible.—ST. ALBANS.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.                                 |                    | Temperature of the Air. |           |           |           | Rain.       | Temperature of the Soil.<br>At 9 A.M. |                |                | Lowest Temperature on Grass. |
|---------------------------------------|--------------------|-------------------------|-----------|-----------|-----------|-------------|---------------------------------------|----------------|----------------|------------------------------|
| 1902.<br>November<br>and<br>December. | Direction of Wind. | At 9 A.M.               |           | Day.      | Night     |             | At 1-ft. deep.                        | At 2-ft. deep. | At 4-ft. deep. |                              |
|                                       |                    | Dry Bulb.               | Wet Bulb. | Highest.  | Lowest.   |             |                                       |                |                |                              |
| Sunday ... 30                         | E.N.E.             | deg. 46.8               | deg. 46.2 | deg. 47.1 | deg. 45.2 | Ins. 0.22   | deg. 45.3                             | deg. 46.5      | deg. 48.5      | deg. 44.0                    |
| Monday ... 1                          | E.S.W.             | 44.9                    | 44.3      | 49.7      | 44.0      | 0.11        | 45.9                                  | 46.8           | 48.7           | 43.2                         |
| Tuesday ... 2                         | N.W.               | 47.1                    | 44.6      | 50.1      | 44.3      | —           | 46.0                                  | 47.0           | 48.5           | 34.0                         |
| Wednesday ... 3                       | S.S.E.             | 37.3                    | 35.9      | 38.4      | 31.5      | —           | 43.4                                  | 46.9           | 48.5           | 22.1                         |
| Thursday ... 4                        | N.N.E.             | 30.3                    | 29.5      | 34.7      | 28.2      | —           | 40.6                                  | 46.0           | 48.5           | 22.1                         |
| Friday ... 5                          | N.N.E.             | 31.5                    | 31.0      | 32.8      | 25.1      | —           | 38.7                                  | 44.8           | 48.5           | 15.3                         |
| Saturday ... 6                        | E.N.E.             | 32.0                    | 31.6      | 32.3      | 29.1      | —           | 37.9                                  | 43.9           | 48.2           | 28.0                         |
| MEANS ...                             |                    | 38.6                    | 37.7      | 40.7      | 35.3      | Total. 0.33 | 42.5                                  | 46.0           | 48.5           | 23.8                         |

With the exception of one day (Tuesday, 3rd), the weather during the past week has been very cold and cheerless.



\* \* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**BACK NUMBERS (H. S.).**—We do not remember any special articles on the subject to which you refer, in our last volume, and time is much too precious for us to search through each issue.

**HEATING GLAZED VERANDAH (W. G.).**—For heating the verandah, not more heat being required than sufficient to keep out the frost, a portable hot water apparatus, oil being used as fuel, would suit. The "Reliable Hot Water Boiler," with product pipes over water pipes, thus utilising all the heat of burners, is the most likely to answer your purpose. It is made by W. Cooper, Limited, 751, Old Kent Road, London, S.E., who would give estimate on your stating dimensions of verandah, with rough ground plan as submitted to us.

**PLUM TREE GUMMING (H. J.).**—Gumming, or the exudation of sap, arises from a variety of causes; in your case it is probably as you suggest, the result of the summer, assuming that your trees are not excessively vigorous. Like yourself, we have known fruit trees much injured by shooting bullfinches in them, and you afford evidence that practice is not necessary in reducing the number of these birds, since you have entrapped fifty-eight of them this autumn. Perhaps if you were to describe your method it might be useful to others.

**MANURES (H. S.).**—The chief constituents in chemical manures are nitrogen, potash, and phosphoric acid in the shape of sulphate of ammonia or nitrate of soda, muriate, nitrate, or sulphate of potash; and superphosphate of lime or bonemeal. The advertised fertilisers contain those constituents blended better than you can probably blend them yourself, and are used by most of the leading cultivators. Urine contains all those ingredients. It is excellent as a manure, but must only be given to plants when growing, and in a diluted state. One of the most fertilising of liquid manures is composed of Cabbage leaves and other vegetable refuse, putrefied in the urine from a house or stable, and diluted with three times its quantity of water when applied. If mixed with bleaching powder (chloride of lime) there will be no offensive smell. Gypsum mixed with it, or a little oil of vitriol poured in, adds to its utility as a manure, as it prevents the escape of ammonia during putrefaction. Instead of adding three times the quantity of water, it would be safer with more than twice that quantity for the majority of plants in pots, and then would not benefit all, regardless of kinds, root action, and soil. If you will send your postal address we will endeavour to answer your other question.

**SCALE ON PEACH TREES (H. G.).**—The brown scale infesting Peach and Nectarine trees, *Lecanium persicæ*, does not, so far as we are aware, "descend to the earth" in winter, but it passes that period in the egg state beneath the scale, and in the spring hatches out, being a small whitish woodlouse-like creature, and after a few days fixes on a part of the bark, through which it pushes its beak, and by means of which it abstracts nourishment from the tree, and grows, and forms over itself a scale-like covering, hence the term scale. It is not easily destroyed in the winter time, simply because the eggs are not reached by an insecticide, or, if reached, not killed. The best time to assail the pest is in the spring time, or when the fruit is set and commencing to swell, then syringing, or, for economy of material, spraying, with paraffin emulsion, 6oz to three gallons of water, and repeat at intervals afterwards. As a winter dressing, 4oz of commercial caustic soda may be placed in a bucket half filled with water and 3oz of pearlash added, stirring until dissolved, then dilute to four gallons with water. Meanwhile, dissolve 4oz of softsoap in a little hot water, and when dissolved add to the four gallons of caustic alkali solution, and, well stirred, it is ready for use. Apply with a clean, half-worn paste brush, it sufficing to merely wet all the wood, and not use too lavishly, or the wood, especially young, will be injured. It must be applied when the trees are quite dormant, and should be kept as much as possible from the hands, preferably protected by rubber gloves. This will destroy the eggs of scale reached, and also eggs and larvæ of thrips and red spider.

**PLAN FOR A MAZE (H. H.).**—In the *Journal of Horticulture*, April 17, 1872, page 323, is given a plan of a maze. As you may not have this number, and it is probably out of print, we may in a future number reproduce the plan.

**VINES FOR LATE VINERY (F. L. D.).**—As you require seven Vines, and will probably require to commence cutting in November onward to April, we advise Madresfield Court, Muscat of Alexandria, Black Alicante, Alnwick Seedling, Mrs. Pearson, Gros Colman, and Lady Downe's; but if you do not want to commence cutting before Christmas, then we advise two Black Alicante, two Alnwick Seedling, one Mrs. Pearson, and two Lady Downe's, which are all of good quality. As the border must be flat provide extra drainage, and do not make a deep border; 24in to 30in is quite deep enough. Crushed bones are the best, using at the rate of a twentieth of the loam, and well incorporating them therewith.

**STEAMED BONE FLOUR (T. R.).**—This is the result of grinding bones that have had the fat and a portion of the ossein melted out of them by being subjected to steam pressure and powerful heat in a close boiler. When the bones are thus dried they can be ground into finer particles than new bones can, and the action of the manure is quicker in consequence, notwithstanding that the finer and drier flour may contain a little less nitrogen. Perhaps your best plan will be to dissolve them by either of the following methods, as may be most convenient:—1, Place 5cwt. (or twelve bushels) of bone on an earthen floor, surrounded by a rim of ashes; pour on as much water as the bones will suck up, and then pour on 2cwt of sulphuric acid; it will boil somewhat violently for a while. When this has subsided, it will get tolerably solid, and the ashes and all may be shovelled up together, and will be fit for use in a day or two. 2, Take a large watertight hogshead and cover the bottom with about 6in deep of dry soil; on this put a layer of bones of the same depth, and cover them entirely with wood ashes; on these another layer of bones, then ashes, and so on till the hogshead is full, placing a good thickness of ashes on the top. Leave it exposed to the rains all summer and winter till spring. Then on removing the contents of the hogshead the bones will crumble to powder under a slight pressure, and form one of the most valuable manures ready for immediate use.

**NAMES OF FRUITS.**—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (Dr. Appleton).—1, Boston Russet; 2, Reinette Lithuanienne—it is very pretty and very similar to Yorkshire Beauty; 3, Cathlin Pippin—a very good variety that should be more largely cultivated; 4, Mère de Ménage—exceptionally good so far north; 5, Belle de Pontoise—very fine; 6, Flanders Pippin—excellent; 7, Egremont Russet—a splendid sample. All the fruits are large, clean, and would be highly creditable to a southern grower. (H. W., Mon.).—1, Marie Louise d'Uccle; 2, Deux Sœurs. (J. M. W.).—We do not recognise Apple.

### Gardeners' Provident and Charitable Institutions.

**THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.**—*Secretary*, Mr. G. J. Ingram, 175, Victoria Street, S.W.

**UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.**—*Secretary*, Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

**ROYAL GARDENERS' ORPHAN FUND.**—*Secretary*, Mr. Brian Wynne, 8, Danes Inn Strand, London, W.C.

### Publications Received.

"The Canadian Horticulturist." Special features: The Triumph Pear, Summer Treatment of San Jose Scale, Hints to Apple Shippers, Apples in the Georgian Bay District, and A Study in Fruit Blossoms. \* \* "Garten Flora," November 15, 1902. \* \* "L'Horticulture Nouvelle," November 10. Summary: New Cannas for 1903, The new Roses Lyonnaises, Preservation of Legumes during Winter. \* \* "Trees and Shrubs for English Gardens," by E. T. Cook; Country Life Library, 12s. 6d. net. \* \* "Cassell's Dictionary of Practical Gardening," by W. P. Wright, 2 vols., 30s. net. Cassell and Co., Limited. \* \* "The Tropical Agriculturist," November, 1902. Some of the articles are entitled: Coconut Water, Artificial Manuring for Tea, Ceylon Tea in Australia, Foliar Periodicity in Ceylon, African Oil Palm, Fauna of British India, Chinchona Bark and Quinine, Some New Species of Rubber, Fixation of Nitrogen by Algæ, Gardening on Tea Estates, The Indian Rubber Tree, Cultivation of Pineapples, and Pineapples as an Aid to Digestion. \* \* "Cassell's Dictionary of Gardening," Part 19 (7d. net). The part takes us from Terraces to Vitis. Another issue completes the work, which already has been sent to us completed and bound in two volumes. \* \* "Natural Law in Terrestrial Phenomena," by William Digby, C.I.E.; London: W. Hutchinson and Co., Trafalgar Buildings Charing Cross, 1902. \* \* "The New Zealand Farmer, Stock and Station Journal," October, 1902.

### Trade Catalogues Received.

Dicksons, Chester.—*General Nursery Stock.*

Hogg & Robertson, 22, Mary Street, Dublin.—*Forest Trees, Conifers, Roses, &c.*

Vilmorin, Andrieux & Co., 4, Quai de la Mégisserie, Paris.—*Seeds, Trees, and Shrubs.*



### More about Nitragin.

Readers must first be warned against confusing this substance with nitrogen, which, although it is also used, and, in fact, is indispensable as a fertiliser, is of a very different nature. Nitrogen is a chemical substance, whereas Nitragin is a concentrated mass of bacteria; one is an inert mass, the other is pregnant with activity. Professor Hellriegel first discovered that the nodules on the roots of leguminous plants were inhabited by myriads of minute bacteria which had the power of absorbing nitrogen from the atmosphere of the soil; that is, from the small air spaces it contained. That discovery has since been turned to practical use by Professor Nobbe. It had been noticed that on certain fields the nodules on Clover roots were much more numerous than in other fields, and that in the latter the growth of Clover was much less vigorous. The application of a dressing of soil from the former fields upon the latter was found to have a marked effect in increasing the number of nodules and the vigour of the plants. The success of this inoculation led to the systematic culture of the bacteria, and cultures in very concentrated form can now be purchased under the name of Nitragin. This can be applied to the soil in various ways, the most successful one being that termed seed inoculation. The Nitragin is moistened, then mixed with very finely powdered ashes or soil, then again mixed with the seed, which is immediately sown.

On some soils on which Clover does well, Nitragin has absolutely no effect, the bacteria being already present in sufficient numbers; but on sandy or gravelly Clover-sick soils it has a marked effect. In Canada organised experiments with Nitragin have been carried out with encouraging results, and there is certainly a prospect that the substance will take a permanent and important place in the economy of agriculture. It has one drawback, it will not keep more than five or six weeks, and is easily destroyed by being subjected to a heat of 100deg Fahrenheit or above.

If it is difficult to keep in concentrated form, however, there is no reason why it should not be cultivated in a heap of compost, to be afterwards spread on the land when convenient. That would be a practical way of storing it, for it will not bear much light, and in a limy compost heap there would be no danger of an undesirable heat.

It is a matter of common knowledge amongst farmers that nothing improves herbage and encourages the growth of Clovers more than a top dressing of turf from a roadside. The use of limestone, slag, and, to a smaller extent, granite, in repairing roads has encouraged the growth of Clovers on the grass roadsides through the constant spreading of road scrapings on the grassy surface. Of course, we are referring to country roads and primitive methods of road management. When the grass at the side became, by constant additions of scrapings, higher than the surface of the road, a farmer, usually the occupier of the adjacent land, would be requested to plough up the roadside and cart away the soil so moved. This roadside stuff, as before stated, is most valuable as a top dressing to pastures of all descriptions, and we venture to suggest that the source of its action is Nitragin in a natural state, which has been accumulated in the roadside Clover plants.

In the experiments during 1897, 1898, and 1899 at the State experimental farm at Ottawa, one field, part of which had been nitraginised for Clover, was allowed to stand for a second Clover crop, when the difference between the



treated and untreated parts was greater than in the first year, so that there would seem to be some permanence about the results. We have noted that some soils do not require Nitragin, as sufficient bacteria are already present; but there is a very important point besides, and that is, the sufficient aëration of the soil, for if the bacteria have to draw their nitrogen from imprisoned air they will be inactive where there are no air spaces, and it will readily be seen why Clovers and similar plants disappear in water-logged places, for the bacteria cease to exist, and without them the vigour of the plant soon declines.

It requires little argument to show what a close connection this matter has with the desirability, nay necessity, of deep cultivation, and exposure of the soil to the atmosphere, also with the value of green crops for ploughing in, and the waste of fertility when the soil lies long unmoved, and with nothing but weeds growing upon it.

It is supposed by some scientists that other plants besides the leguminous have their parasitic bacteria, which act in a similar, though less marked, way; and, in fact that there may be so few exceptions that the value of soil movement and ventilation may be entirely due to the requirements of these minute servants of vegetable life. But there are other ways of aërating the soil than by cultivation. A great breadth of land is now farmed on the system of temporary pastures, and especially the light soils which have been found unprofitable for corn growing, and some of the heavier lands which are so expensive in horseflesh. When land is allowed to lie in temporary pasture for three, four, or five years, and there is no active cultivation, how is the lower soil to be kept in an open state? The action of worms may keep the surface open, but how about the lower strata? Well, we believe that the value of deep-rooting plants like Burnet, Kidney Vetch, and Chicory lies in their deep penetration into the subsoil, and that their deep root action has a most beneficial effect in keeping open the pores and assisting soil ventilation.

Earthworms no doubt are of great use in the same direction; whilst we have always contended that moles in reasonable quantities must do more good than harm, although so many farmers think differently.

We all know how absolutely necessary an open, free mould is to the Potato crop, and it is quite possible that the Potato may possess minute parasitic assistants also, which, working in the small air spaces, may be breaking up and supplying nitrogen to the tubers.

### Work on the Home Farm.

We have not had a really fine day for a week, and to-day there has been some snow, so perhaps we may soon have some frost. It would do good in many fields, but will be inconvenient if it comes before we get our Swedes taken up. It has been far too wet to get them up lately, and the land is now so soft that we shall not be able to cart on it at present. That will not prevent storing in small heaps, which will be proceeded with when the weather will allow. Hitherto the delay has favoured an increase of the crop. We noticed last week two fields where a start to store Swedes in heaps had been made, and in both cases they were being thrown together just as they were pulled from the ground. This system appears to be gaining ground.

A way sometimes followed to save the labour of pulling is to reverse the two front shares of a horse hoe so that when it proceeds between the two rows of Swedes the shares cut through the Swede roots on either side. This is effective if the shares are kept well sharpened, but it is rather a rough-and-ready way, as a good deal too much is cut off from many of the best roots. It will do for Tankard varieties, which do not root deeply in the ground, but for other kinds we prefer pulling. The week has been bad for threshing, although the smoke of the engine has been noticed here and there. We have been dressing and delivering one lot of corn; the rest of the week has been occupied in tidying up. Through pressure of work the stackyard had been left with too much pulse and heaps of thatch about. The open yards, which were well bedded when the cattle were brought up, were soon converted into morasses by the rain, so all the odds and ends from the stackyard have been carted in and the yards made comfortable once more. The covered yard is dry and comfortable with but little short bedding, and if the weather keeps wet the open yards will be as bad as ever in three or four days. What a difference! But then covered yards cost money. We shall be threshing again directly (money this time, not straw!), and are undecided what to thresh. Barley is very bad to sell just now, and will be until after Christmas, whilst Oats are still a fair trade, though the straw will not be wanted until spring, and will have to be thatched. We think we shall thresh Oats. It is good policy to sell what is most saleable.

Last April we purchased sixpennyworth of water glass, which, after diluting with clean water, we put into a jar capable of containing 200 eggs, which were put in quite fresh as they were laid. The liquid was diluted so as to well cover the eggs. We are using those eggs now, and they are apparently as good as fresh ones.

## Webb & Sons' Stand at the London Cattle Show.

Among the exhibits of roots, cereals, Potatoes, &c., at the Smithfield Club Show; that of Messrs. Webb and Sons, of the Royal Seed Establishment, Wordsley, Stourbridge, is acknowledged to be one of the finest of all. It comprises specimens of the champion roots and grains of the year, which have been grown from this celebrated firm's seed and with the aid of their equally famous special manures. At the recent London Dairy Show a collection of Webbs' Mangolds, Swedes, and Turnips won the first prize open to Great Britain, and Webbs' Imperial Swede also carried off the champion prize, for which there were eighty-two entries. A very fine lot of this Swede is shown, some of the specimens being drawn from the crop, weighing over fifty-eight tons per acre, grown by Mr. R. Roberts, Brongadair, Portmadoc, who has won the first prize, £15 15s., for the best five acres of Swedes, open to England and Wales, this year. Webbs' Imperial Swede has won first prize at Birmingham Show for twenty-five years. Another striking feature of this exhibit is Webbs' New Smithfield Yellow Globe Mangold, a variety which is without a peer for heavy cropping and fine quality. The specimens exhibited were grown by Mr. P. Price, Howick Farm, Chepstow, and the crop, which was grown with Webbs' Special Manure, was certified by a competent and disinterested judge to weigh 93 tons 14 cwt per acre, the record for the year.

Webbs' New Lion Yellow Intermediate Mangold makes another imposing feature, as also do Webbs' Mammoth Long Red and Yellow-Fleshed Tankard, whilst that favourite Yellow Turnip, Webbs' Invincible, is conspicuous for its large size, splendid shape, and quality. Other roots shown include Webbs' New Buffalo Swede, Webbs' Giant King Swede, Webbs' Green Globe Turnip, &c. Webbs' new and improved breeds of cereals are also exhibited, and clearly demonstrate the valuable results that Messrs. Webb have obtained by the course of cross-fertilisation and selection which they have conducted for so many years past at their well-known Kinver Seed Farms. Webbs' Newmarket Oat and Webbs' Kinver Chevalier Barley stand unrivalled for quality and productiveness.

The latter has won the champion prize, open to the world, on seven occasions, as well as most of the other leading honours, including the Colchester Gold Cup, and first, second, and third prizes as recent as last week. Whilst it would be impossible to detail the wonderful list of awards made to the produce of Webbs' seeds this season, we may mention the following recent honours: London, four first and other prizes; Birmingham, fourteen first and other prizes; Cardiff, thirty-seven champion and other prizes; Edinburgh, five first and other prizes; Liverpool, thirty-nine first and other prizes; Norwich, ten first and other prizes; Brewers' Exhibition, London, twenty-seven first and other prizes; four medals and nineteen diplomas; and (with one exception) the whole of Proctor and Ryland's prizes for root crops, value £110 5s. A fine collection of Potatoes introduced by this firm is another interesting feature, and we noticed two new varieties for next season, Webbs' Table King and Webbs' Guardian, which are handsome in appearance and said to be disease-resisters. Messrs. Webb are donors of two challenge cups, value 100 guineas each, at the Birmingham and Edinburgh Shows, and these are also shown on this stand.

### J. King & Sons at the Smithfield Cattle Show.

The system of pedigree selection is now acknowledged to be one of the most remarkable developments in British agriculture. Whether applied to cattle or roots, it is equally important, and the stand, No. 84, of Messrs. John K. King and Sons, seedsmen by Royal Warrant to H.M. the King, of Coggeshall and Reading, furnishes a splendid example of the value of the pedigree selection. It is not generally known that the founder of the business of John K. King and Sons was the originator of the system of saving seeds from pedigree roots, and he and his successors, who have carried it on with so much success, are among the oldest exhibitors at the Smithfield Club Cattle Show. Prominent on this extensive and well-arranged stand are the Essex Prize-winner Yellow Globe Mangold, the Golden Tankard Yellow-fleshed Mangold, and the New Pedigree Swede John Bull; also some splendid specimens of Champion Orange Globe, Improved Yellow Intermediate, and Mammoth Long Red Mangolds.

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|                |                            |
|----------------|----------------------------|
| 1½ to 2 ft. .. | 6/- per doz., 30/- per 100 |
|----------------|----------------------------|

## BUXUS SEMPERVIRENS (Tree Box).

|                |                            |
|----------------|----------------------------|
| 1 to 1½ ft. .. | 4/- per doz., 20/- per 100 |
| 1½ to 2 ft. .. | 6/- per doz., 35/- per 100 |

## DAPHNIPHYLLUM GLAUCESCENS.

Strong plants, from open ground, 18/- to 24/- per doz

## HOLLIES, Hodginsi, Laurifolia, and others, extra-fine specimens,

|  |                    |
|--|--------------------|
| 5 to 6 ft. ..                                  | 10/6 and 12/6 each |
| 6 to 7 ft. ..                                  | 15/- and 18/- each |
| 7 to 8 ft. ..                                  | 21/- and 31/6 each |
| Extra-fine bushy specimens, 42/- and 63/- each |                    |

## LAURUS (Laurel), CAUCASIAN, LATIFOLIA, and ROTUNDIFOLIA.

|  |              |
|--|--------------|
| 1½ to 2 ft. ..   | 18/- per 100 |
| 2 to 3 ft. ..  | 30/- per 100 |
| 3 to 4 ft. ..  | 60/- per 100 |
| Extra-fine bushy specimens, 3½ to 4½ ft. 18/- and 24/- doz |              |

## PRIVET, oval-leaved, extra-fine bushes, 4 ft. in diameter

5 to 6 ft. high 2/- and 2/6 each, 18/- and 24/- doz

6 to 7 ft. high 2/6 and 3/6 each, 24/- and 30/- doz

## PHILLYREA DECORA.

|                |                   |
|----------------|-------------------|
| 1½ to 2 ft. .. | 12/- and 15/- doz |
|----------------|-------------------|

## POLYGONUM SACHALINENSE.

|   |
|---|
| 2/6 to 4/- per doz., 15/- to 20/- per 100 |
|---|

## RHODODENDRONS.

Choicest named kinds, stout bushy plants, 30/-, 35/-, and 42/- doz., 200/-, 250/-, and 300/- per 100

## SYRINGA (Lilac).

Choice named kinds, with single and double flowers, strong bushes

|               |                                       |
|---------------|---------------------------------------|
| 3 to 4 ft. .. | 9/- to 12/- doz, 40/- to 60/- per 100 |
|---------------|---------------------------------------|

## CONIFERS.

## ABIES MENZIESII.

|               |                    |
|---------------|--------------------|
| 3 to 4 ft. .. | 1/3 each, 12/- doz |
|---------------|--------------------|

## " PUNGENS GLAUCA.

|                |                      |
|----------------|----------------------|
| 4 to 6 in. ..  | 6/- 100, 50/- 1000   |
| 6 to 9 in. ..  | 12/6 100, 100/- 1000 |
| 9 to 12 in. .. | 20/- 100, 175/- 1000 |

## ARAUCARIA IMBRICATA.

|                |                    |
|----------------|--------------------|
| 2 to 2½ ft. .. | 3/- each, 30/- doz |
| 2½ to 3 ft. .. | 4/- each, 42/- doz |

## CEDRUS ATLANTICA GLAUCA.

|               |                    |
|---------------|--------------------|
| 3 to 4 ft. .. | 4/6 each, 48/- doz |
| 4 to 5 ft. .. | 6/6 each, 72/- doz |

## " DEODARA.

|                |                    |
|----------------|--------------------|
| 1½ to 2 ft. .. | 2/- each, 18/- doz |
| 2 to 3 ft. ..  | 3/- each, 30/- doz |

## PINUS CEMBRA.

|               |                    |
|---------------|--------------------|
| 2 to 3 ft. .. | 1/6 each, 15/- doz |
| 3 to 4 ft. .. | 2/6 each, 24/- doz |

## " EXCELSA.

|                |                   |
|----------------|-------------------|
| 1 to 1½ ft. .. | 1/- each, 9/- doz |
|----------------|-------------------|

## TAXUS BACCATA (English Yew).

|                |                            |
|----------------|----------------------------|
| 1 to 1½ ft. .. | 4/- doz., 25/- to 30/- 100 |
| 1½ to 2 ft. .. | 6/- doz., 40/- to 45/- 100 |

## " BACCATA ELEGANTISSIMA.

|                |                    |
|----------------|--------------------|
| 1½ to 2 ft. .. | 2/6 each, 24/- doz |
|----------------|--------------------|

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## SEAKALE.

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|-------------------------------------|----------------------|
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| Extra strong for forcing ..         | 14/- to 18/- per 100 |
| Strong planting ..                  | 7/6 to 10/6 per 100  |
| LILYWHITE, extra strong for forcing | 18/- to 25/- per 100 |
| LILYWHITE, strong planting          | 10/- to 12/6 per 100 |

## ASPARAGUS.

|                             |              |
|-----------------------------|--------------|
| Extra strong for forcing .. | 20/- per 100 |
|-----------------------------|--------------|

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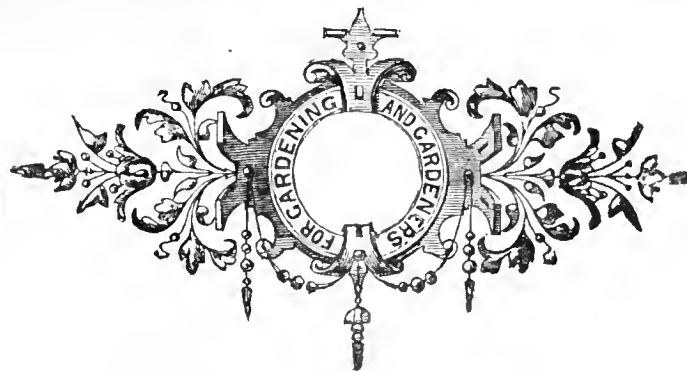
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## Journal of Horticulture.

THURSDAY, DECEMBER 18, 1902.

## Chrysanthemum Analysis.

ONCE more, by the aid of those persons who are deeply interested in the welfare of the Autumn Queen, and who are so wishful to assist the inexperienced, I am able to present an up-to-date selection of Chrysanthemums, fully representing the pick of the Japanese and incurved sections.

Thinking to make the selection still more valuable, I restricted the voters to those who are at present, leading exhibitors, not even adding a selection myself. If this note should catch the eye of any person who has in the past so kindly assisted in this audit and who does not now take an active part in exhibiting, he will readily understand why I did not invite him to take part this season.

This yearly Chrysanthemum audit is eagerly looked for as far away as Australia, New Zealand, and America, where cultivators appear to be equally interested in the flower; they there consider this English selection by votes most helpful to them there in knowing which varieties to introduce for their own culture. A selection of varieties under the method adopted appears to me to better illustrate the opinion of those best calculated to judge as to the selection of a collection, as compared to the making up of a list of those varieties exhibited at any prominent show, like that of the N.C.S. or Edinburgh, because under these newer conditions the opinion of those widely separated is obtained. From the list of the voters given below, it will be seen that no fewer than seventeen counties are represented. From invitations to take part, but three failed to send in selections, no fewer than twenty-seven responding willingly and promptly, which is an indication of the deep interest taken in the selection. One person confined his Japanese varieties to four dozen,

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which will account for a slight discrepancy of numbers. It will be difficult indeed for any person to cavil at the selection of varieties in either section.

In the Japanese there is a great absence of varieties in the selected fifty that possess what is known as coarseness; the varieties, when cultivated well, represented all the attributes of a perfect Japanese Chrysanthemum. We have

#### Fifty Best Japanese Varieties

|     |                         |   |                           |
|-----|-------------------------|---|---------------------------|
| 27  | W. R. Church            | 3 | Rev. W. Wilks             |
| 27  | M. Louis Remy           | 3 | Mrs. A. McKinley          |
| 27  | Mrs. G. Mileham         | 3 | Nellie Bean               |
| 25  | Florence Molyneux       | 3 | Phyllis                   |
| 25  | Mrs. Barkley            | 3 | Graphic                   |
| 25  | Australie               | 3 | C. J. Salter              |
| 25  | Madame Carnot           | 3 | Millicent Richardson      |
| 25  | Mrs. W. Mease           | 3 | Vicar of Leatherhead      |
| 24  | Bessie Godfrey          | 3 | Nellie Perkins            |
| 24  | Mrs. Greenfield         | 3 | Mary Perkins              |
| 24  | Nellie Pockett          | 3 | Exmouth Crimson           |
| 24  | Madame Herreweghe       | 3 | Dorothy Pywell            |
| 23  | Lord Ludlow             | 2 | Mr. S. Fryett             |
| 23  | M. Chenon de Leché      | 2 | Godfrey's Masterpiece     |
| 23  | Madame Paolo Radaelli   | 2 | Mrs. Nagelmachers         |
| 22  | Mrs. J. Bryant          | 2 | Swanley Giant             |
| 22  | Ethel Fitzroy           | 2 | Mutual Friend             |
| 22  | Mrs. J. Lewis           | 2 | Donald McLeod             |
| 22  | Duchess of Sutherland   | 2 | C. Penford                |
| 22  | Mrs. T. W. Pockett      | 2 | Florence Penford          |
| 21  | Mafeking Hero           | 2 | Mrs. Bagnall Wild         |
| 21  | Sensation               | 2 | Duchess of Northumberland |
| 21  | Miss Elsie Fulton       | 2 | Mrs. J. W. Barks          |
| 21  | Miss Alice Byron        | 2 | Miss Evelyn Douglas       |
| 20  | Charles Longley         | 2 | H. E. Hayman              |
| 20  | T. Carrington           | 2 | Surpasse Amiral           |
| 20  | Calvat's Sun            | 2 | Mrs. E. Barter            |
| 20  | J. R. Upton             | 2 | Soleil d'Octobre          |
| 20  | General Hutton          | 2 | Mons. Hoste               |
| 20  | Le Grand Dragon         | 1 | Mr. E. Brown              |
| 19  | Mr. F. S. Vallis        | 1 | Godfrey's Triumph         |
| 19  | G. J. Warren            | 1 | Lady Crawshaw             |
| 18  | Edwin Molyneux          | 1 | Georgiana Pitcher         |
| 18  | Mrs. H. Weeks           | 1 | Viseountess Cranborne     |
| 18  | Marquis V. Venosta      | 1 | Beauty of Leigh           |
| 17  | Matthew Smith           | 1 | Durban's Pride            |
| 16  | Madame Gustave Henri    | 1 | Baden Powell              |
| 16  | Lily Mountford          | 1 | George Davis              |
| 15  | Kimberley               | 1 | Godfrey's King            |
| 15  | Henry Stowe             | 1 | Mabel Morgan              |
| 14  | Godfrey's Pride         | 1 | Sydney Brunning           |
| 14  | Calvat's '99            | 1 | Mrs. A. R. Knight         |
| 14  | Mrs. H. Emmerton        | 1 | Lady Aeland               |
| 14  | Sir H. Kitchener        | 1 | Madame Phillipe Rivoire   |
| 14  | George Lawrence         | 1 | Mrs. G. Golder            |
| 13  | J. J. Thornycroft       | 1 | Mrs. Vallis               |
| 13  | Mrs. Coombes            | 1 | Madame Desblane           |
| 13  | Loveliness              | 1 | Mrs. W. H. Lees           |
| 13  | Madame R. Cadbury       | 1 | International             |
| 12  | Madame Waldeck Rousseau | 1 | Mrs. T. A. Compton        |
| -50 |                         | 1 | Marie Calvat              |
| 11  | Guy Hamilton            | 1 | Lady Phillips             |
| 11  | Vivian Morel            | 1 | Emily Towers              |
| 11  | Lord Salisbury          | 1 | Edith Dashwood            |
| 10  | Mrs. White Popham       | 1 | Mermaid                   |
| 9   | Lady Hanham             | 1 | Henry Barnes              |
| 9   | Mrs. E. Hummel          | 1 | Lady Helen Clark          |
| 9   | Princess B. de Brancova | 1 | Dorothy Fox               |
| 8   | Edith Tabor             | 1 | Charles Davis Improved    |
| 7   | Pride of Madford        | 1 | Lionel Humphrey           |
| 7   | Charles Davis           | 1 | Mrs. J. Cleeve            |
| 7   | Henry Weeks             | 1 | Mrs. W. F. Holt Beever    |
| 6   | Mrs. E. Thirkell        | 1 | Earl of Arran             |
| 6   | Mrs. J. C. Neville      | 1 | Pride of Exmouth          |
| 6   | General Buller          | 1 | May Vallis                |
| 6   | Ben Wells               | 1 | Mrs. J. Cutts             |
| 6   | Mrs. R. Darby           | 1 | Mrs. F. S. Grimwade       |
| 6   | Princess A. de Monaco   | 1 | S. T. Wright              |
| 6   | Madame G. Debric        | 1 | Cheltoni                  |
| 6   | Mrs. G. W. Palmer       | 1 | Sir W. Aeland             |
| 5   | Phœbus                  | 1 | Pride of Stokell          |
| 5   | Violet Lady Beaumont    | 1 | Dolly Glide               |
| 5   | George Carpenter        | 1 | Mrs. W. Curshaw           |
| 5   | W. H. Whitehouse        | 1 | Rev. Douglas              |
| 5   | The Princess            | 1 | R. Hooper Pearson         |
| 5   | Lady Ridgway            | 1 | Scottish Chief            |
| 4   | Miss Mildred Ware       | 1 | W. F. B. Archibald        |
| 4   | Jane Molyneux           | 1 | Ernest Bettesworth        |
| 4   | Lord Alverstone         | 1 | Mrs. G. Griffin           |
| 4   | Miss Luey Evans         | 1 | C. J. Mee                 |
| 4   | Mrs. A. Barrett         | 1 | Madame Georges Bruant     |
| 4   | Miss E. Pilkington      | 1 | Secrétaire Fierens        |
| 4   | Queen Alexandra         | 1 | Miss Olive Miller         |
| 4   | Edith Shrimpton         | 1 | G. Mileham                |
| 3   | George Penford          | 1 | Mrs. F. W. Vallis         |
| 3   | Master C. Seymour       | 1 | Lady Mary Conyers         |
| 3   | Mrs. C. H. Payne        |   |                           |

173—total number of varieties.

size, form, colour, and solidity of petal to the fullest extent. So consistent are the varieties raised within the last few years that there is an absence of any great change in the position of varieties in the list. Last year Florence Molyneux, Mrs. Barkley, Le Grand Dragon, M. Louis Remy, and M. Chenon de Leché tied for the premier position. This time, M. Louis Remy still occupies a similar place, while the others have receded but a vote or two, which illustrates their consistency in all respects, especially in constitution for growth. This is a point that has always to be contended with in Chrysanthemum culture. Plants that are grown at express speed, as it were, are liable to have their constitution impaired; none but the strongest can withstand the feeding the plants are subjected to.

As was to be expected, that magnificent coloured variety, W. R. Church, has advanced its position, and now stands at the head of the poll along with two others. Mrs. G. Mileham, another charming variety, both in form and colour, is at the head, and rightly so, as it would be difficult to name a better type of a Japanese Chrysanthemum. This variety so naturally reflexes its florets under decent cultivation as to dispense altogether with the necessity to "turn" its petals, a process objected to by some persons.

Australie still holds its place as the finest of the incurving Japanese kinds; no other variety is so typical of this section, and those who attempt to improve its appearance by "turning" its florets have much to learn in the management of this variety. Madame Carnot still maintains its position as one of the best of white flowering varieties, and so does Mrs. Mease as a pale yellow form. Its sport, G. J. Warren, has dropped lower down; its place is now occupied by Mrs. Greenfield, which is perhaps the finest yellow-flowered variety in cultivation, along with Bessie Godfrey, both yellows, but of an entirely different tint of colour. Both possess, too, form of the best kind, not a particle of what can by any stretch of imagination be termed coarse.

Madame Paolo Radaelli, from four votes last year, has this time risen to twenty-three. At times it is an exceedingly fine incurving variety; at others its florets droop gracefully with but a small curl in them. Duchess of Sutherland from two votes has risen this year to twenty-two, which proves that its intense yellow colour and peculiar florets have admirers.

Two practically new varieties—Mrs. T. W. Pockett and Mr. F. S. Vallis—now occupy a very prominent position. The last named is one of M. Calvat's best, and was not once mentioned last year. This time it receives nineteen votes, while the former has risen twenty-one votes. Both of these are yellow-flowered, but quite distinct in tint from any other. Mafeking Hero, not once mentioned last year, this time receives twenty-one votes. I look upon this as quite one of the best of bright coloured varieties. The manner in which Edwin Molyneux still retains a strong position is little short of marvellous, considering it was introduced as far back as 1886. Now it is quite alone in its colouring. Of the thousands of seedlings raised from it not one has the colour of itself. In constitution, too, it does not lack.

Edith Tabor, at one time regarded as one of the best of yellow-flowered varieties, has dropped quite out of the selected fifty. It cannot be said that this variety retains its former size, although it does in colour and form. Such huge coarse-growing varieties as Mrs. White Popham, Mrs. G. W. Palmer, Graphic, International, and Mrs. C. H. Payne have almost dropped out of existence, and fortunately so will be the general opinion.

Mutual Friend, which at one time was regarded as one of the best of white-flowered varieties, has now given place to others of the same colour but of superior "build." Last year it was in the selected fifty; this time but two persons name it. That charming section of small flowered forms of Vivian Morel are found wanting in size; even the type itself does not now receive support, showing clearly that size is still an element of consideration. Miss Elsie Fulton, from four votes last year, has risen to twenty-one, as it was sure to, having all the characteristics of a thorough incurving flower of the purest white. Lord Ludlow still maintains its position, and rightly so.

Many others beside myself will be surprised at the position occupied by Pride of Madford, itself quite alone in colour, and a gorgeous colour too. At the present time it is not even in the selected fifty. As was to be expected,

the total number of varieties exceed those of last year, but not in a great degree. Last year sixteen persons named 152, while the twenty-seven this time give 173 names—not a great increase really. This is a step in the right direction, as I think voters are more in accord of what should be the prevailing points of excellence.

#### Thirty-six Best Incurved Varieties.

|                           |                                |
|---------------------------|--------------------------------|
| 19 C. H. Curtis           | 4 Cecil Cutts                  |
| 19 Duchess of Fife        | 4 King of Yellows              |
| 19 Hanwell Glory          | 4 Mrs. W. Howe                 |
| 19 Miss Nellie Southam    | 4 Perle Dauphinoise            |
| 18 Lady Isabel            | 4 Mrs. J. Murray               |
| 18 Frank Hammond          | 4 Violet Tomlin                |
| 18 Ialene                 | 4 Creole                       |
| 17 Madame Ferlat          | 3 Charles Blick                |
| 17 Mrs. R. C. Kingston    | 3 Mrs. Molyneux                |
| 17 Topaze Orientale       | 3 Mrs. J. Eadie                |
| 17 Ma Perfection          | 3 The King                     |
| 17 Mrs. H. J. Jones       | 3 Madame Durandel              |
| 17 Pearl Palae            | 3 Comtesse d'Etoile            |
| 15 Chrysanthemiste Bruant | 3 Mrs. S. Coleman              |
| 14 Globe d'Or             | 3 Miss E. Gerrard              |
| 14 R. Petfield            | 3 Baron Hirsch                 |
| 13 Countess of Warwick    | 3 Mrs. Gerard Williams         |
| 12 Fred Palmer            | 2 Egyptian                     |
| 12 Lord Alcester          | 2 Miss F. Southam              |
| 12 J. Agate               | 2 May Bell                     |
| 12 Ralph Hatton           | 2 Mrs. W. Higgs                |
| 11 Mrs. C. Crooks         | 2 W. Neville                   |
| 11 Empress of India       | 2 Annie C. Love                |
| 10 Mrs. F. Judson         | 2 President Bevan              |
| 10 W. Higgs               | 2 Mr. F. King                  |
| 10 Louisa Giles           | 2 Alfred Salter                |
| 10 Golden Empress         | 2 Austin Cannell               |
| 10 John Lambert           | 2 Bonita                       |
| 9 Major Bonaffon          | 2 Ada Owen                     |
| 9 Mdle. Lucie Faure       | 1 Henry Ellis                  |
| 9 Madame de Verneuil      | 1 The Colonel                  |
| 9 Miss V. Foster          | 1 Edinburgh                    |
| 9 Miss Annie Hills        | 1 John Doughty                 |
| 9 Ernest Cannell          | 1 Prince Alfred                |
| 9 Miss D. Foster          | 1 C. R. Whitnall               |
| 8 George Haigh            | 1 Yvonne Desblanc              |
| 36                        | 1 John Carvill                 |
|                           | 1 Mrs. W. Harvey               |
|                           | 1 Mrs. E. Bennett              |
|                           | 1 Snowdrift                    |
| 7 General Symonds         | 1 Mrs. J. Seward               |
| 7 Nellie Threlfall        | 1 Madame Desblanc              |
| 7 Matthew Russell         | 1 Lord Coleridge               |
| 7 George Lock             | 1 Miss R. Hunt                 |
| 7 Dome d'Or               | 1 Madame E. Rogers             |
| 6 Bonnie Dundee           | 1 Colonel Kekewich             |
| 6 Nellie Stevens          | 1 Eldorado                     |
| 6 Miss E. Seward          | 1 Fouka                        |
| 6 Miss M. A. Haggas       | 1 Madame Darier                |
| 5 Miss Doris Cox          | 1 D. B. Crane                  |
| 5 Edith Hughes            | 1 Thomas Singleton             |
| 5 Mrs. W. C. Egan         | 1 Major Matthew                |
| 5 Pantia Ralli            | 1 Watteau                      |
| 5 Queen of England        | 1 Lydia                        |
| 5 Golden Madame Ferlat    | 1 Mrs. C. J. Mee               |
| 5 Thomas Lockie           |                                |
| 5 Princess of Wales       | 108—total number of varieties. |

#### List of Voters.

Mr. A. Simmons, The Grange, Framfield, Sussex  
 Mr. C. Penford, Leigh Park, Havant  
 Mr. Folkhard, Sand Hutton Hall, York  
 Mr. R. Kenyon, Monkham, Woodford, Essex  
 Mr. J. H. Goodacre, Elvaston Castle, Derby  
 Mr. Neville, Cornstiles, Twyford, Winchester  
 Mr. Nobbs, Osborne House, Isle of Wight  
 Mr. T. Lunt, Keir, Dunblane, N.B.  
 Mr. D. Niccoll, Rossie, Forgandenny  
 Mr. W. Mease, Downside, Leatherhead  
 Mr. C. J. Salter, Woodhatch Lodge, Reigate  
 Mr. G. Hall, Melchet Court, Romsey  
 Mr. G. Haigh, Highfield, Woolton, Liverpool  
 Mr. W. Hunt, Ashstead Park, Epsom  
 Mr. W. Higgs, Fetcham Park, Leatherhead  
 Mr. C. Crooks, Hedsor, Droitwich  
 Mr. G. W. Drake, Cathays Terrace, Cardiff  
 Mr. J. Heaton, The Lawn, Aigburth, Liverpool  
 Mr. C. Beckett, Chilton Lodge, Hungerford, Berks  
 Mr. W. Meredith, Stanstead Park, Emsworth  
 Mr. Jefferies, Moor Hall, Harlow, Essex  
 Mr. Perkins, Greenlands, Henley-on-Thames  
 Mr. G. Foster, Glendanagh, Teignmouth  
 Mr. W. L. Bastin, Buscot Park, Berks  
 Mr. J. Bible, Draycot Park, Chippenham  
 Mr. J. Brooks, Brandon Hall, Coventry  
 Mr. C. Payne, Sandrills, Bletchworth, Surrey

#### Notes on the Incurved Section.

As was to be expected, all the voters are not cultivators of the Incurved section; they, therefore—rightly, too—did not send in a selection. Nineteen persons took part this time, and without any hesitation I consider the selection given as typical of deserving varieties of the present-day requirement of size and colour. In too many instances—away from the leading cultivators—a want of form has been all too apparent this season. Cultivators are not wholly to blame in this; it is not possible to obtain the true incurved form in some varieties that are admitted into this section. A greater prohibition of varieties that are bred from Japanese kinds would raise the standard of this section.

With C. H. Curtis and Duchess of Fife, Hanwell Glory and Miss Nellie Southam share the honour of being first. The two former occupied a similar position last year. Neither of the two show any sign of failure or a want of popularity at the exhibitions, possessing, as they do, all the attributes of good blooms. The last-named has considerably improved her position in the list since last year; it is a variety worthy of encouragement, being of a taking colour, full size, and desirable form. Frank Hammond, as I predicted last year, has made good strides; it is a flower of exceptional merit. The six varieties that share the third place are all of the right order, if I except one—Topaze Orientale. True, its colour is pleasing, but except when in the best hands it lacks the fulness of petal of such sorts as Mrs. H. J. Jones or Mrs. R. C. Kingston. Chrysanthemiste Bruant, with fifteen votes, is not so highly valued as last year, and rightly so, in my estimation, as it lacks the globular form so desirable.

Fred Palmer, from a solitary vote last year, has risen to twelve marks this time; it possesses all the desirable points of an incurved variety. Lord Alcester, Empress of India, and Golden Empress receive a fair amount of support considering that they are distinctly on the down grade, as the trio, in fact all the members of the family, lack constitution sufficient to enable them to build up good blooms. Mrs. C. Crooks and Mrs. F. Judson occupy a strong position. The last-named last year was not mentioned, while the former received but one vote. That one-time favourite, Princess of Wales, still finds the same number of adherents—five—as last year. It is safe to say that this and its offspring Violet Tomlin, Miss M. A. Haggas, and Mrs. S. Coleman, will in a very short space of time only be heard of occasionally. Many old-time favourites receive but scant support, notably Prince Alfred, which in the neighbourhood of Liverpool twenty years since was the most popular of all. In the present list Jeanne d'Arc, Mons. R. Bahuant, Mrs. Dixon, George Glenny, and Mrs. G. Rundle do not find mention. Fortunately, varieties of doubtful origin, like General Symonds, Perle Dauphinoise, The Egyptian, President Bevan, and Mdle. Laurence Zede receive scanty support, the last-named not being mentioned once in a long list. Without exception these varieties are more injurious to this section than otherwise; one or two such blooms in a stand go a long way towards lowering the standard of quality.

At one time Princess Teck, and its progeny were numerous in any exhibit, and so was Novelty and Lady Hardinge; not one is now mentioned. The present list contains 108 varieties, which is but ten more than last year, from twelve electors.

Judging from the present analysis the incurved section is a long way from being an extinct section, containing as it does ample material for display; but whether the present general method of staging is to be continued is a moot point which time alone can determine.

EDWIN MOLYNEUX, V.M.H.

#### Flowers from the Riviera.

It is reported that arrangements have just been completed by which it will be possible to send fresh-cut flowers from the Riviera to England cheaply and rapidly. A number of florists have arranged to send small boxes of flowers in hampers to an agent at Calais by the express flower train, which leaves Mentone soon after 10 a.m., reaching Paris in thirteen hours. At Calais the hampers are put on board ship, stamped with English stamps, and posted at Dover by parcel post. The flowers should reach their destination in forty-eight hours, and the cost of small boxes under 1lb in weight should not exceed 6d. or 7d.



## Forcing Asparagus.

In order to have suitable roots for forcing, it is important that they should be at least four years old, and have had previous good and generous cultivation, so that the roots are large and strong, and possess power to produce stout and succulent growths. Forcing Asparagus is not difficult, providing the proper roots are available and a hotbed can be formed. A very high temperature is not required—indeed, a strong heat, which is also dry, is injurious, and productive of weak, flavourless growths.

Roots for forcing may be bought, but it is an expensive method of obtaining them. It is much better to grow Asparagus on a system whereby a certain number of roots are available each year, because after forcing they are practically useless for anything further. Home-produced roots should, therefore, be established every season, so that there shall always be the number required without encroaching on the permanent beds. This will permit, therefore, of having four-year-old roots when the system is once established. The best time to plant Asparagus is in spring.

Asparagus being now at rest, the roots may be lifted when the ground is not frozen. Place them in a sheltered position, and cover with soil until ready to place on a hotbed. The best kind of hotbed for forcing is one built up of stable manure and leaves, on which place a frame with lights. The materials for the hotbed should be thrown together in a heap, judging about the quantity required, which must be ample to build a bed 5ft high at the back and 3ft in front, the size of the bed being at least 12in wider than the frame all round, but better a little more. The reason for this is that linings of warm manure can from time to time be placed round the frame to maintain the temperature. When the manure and leaves begin to heat well turn them over, doing this several times, or until the rank and excessive heat engendered has passed away.

Build the bed in a sheltered part of the garden, as penetrating winds from any quarter will quickly cause the loss of heat, which must be retained as long as possible. When the bed is finished place on the frame and lights. Thrust a stick into the heap, and withdraw in a few days, and feel how the heat is going on. The temperature the bed should reach ought to be 70deg. Then cover the surface with soil an inch thick, and on this layer place the clumps of Asparagus roots as thickly as possible. Scatter soil between, but do not cover up the crowns.

Give a slight watering with a rosed can, using warm water. The lights may be covered over with mats until growth begins. This will assist in maintaining the temperature. As the heads begin to appear, apply no covering to the glass except at night, to conserve heat and ward off frost. The full light will cause the heads to become green, which is necessary. Afford air also on favourable opportunities.

During the process of forcing a supply of leaves and manure should be kept in readiness to apply as linings round the frame, so as to maintain the heat regular and uniform. A healthy humidity may be kept up in the frames by an occasional sprinkling with tepid water.—E. DENNIS.

## THE CHERRY HOUSE.

To have ripe Cherries in April the trees must now be started. Early Rivers, Governor Wood, and Black Tartarian are unsurpassed for size and quality, it being unwise to grow many varieties, as these will give a long succession of fruit. In the case of trees in pots, greater variety may be indulged in, yet there are few to equal those named. Be careful of fire heat at the commencement, not employing it unless absolutely necessary to maintain the temperature at 40deg during the night and 45deg to 50deg by day, ventilating when the temperature is that, and not allowing 55deg to be exceeded without full ventilation. Close the house at 50deg. Syringe the trees and other surfaces early on fine afternoons, so as to admit of the buds becoming dry before night. The border will be sufficiently moistened through the removal of the roof lights; if not, it must have water to bring it into a thoroughly moist state. Trees in pots, if at all dry, will require repeated supplies of water to secure the thorough moistening of the soil to the base of the pots.

Aphides do not usually appear until the buds swell and growth takes place, but a sharp look-out should be kept on the buds, and if there are any minute dark objects about them it is wise to fumigate on two or three consecutive evenings. This will make quick work of the small aphides that may appear from the eggs as result of the warmth, and repeating the fumigation at intervals of a fortnight or three weeks it is likely there will be few or not any to infest the growths. Of course, the aphides may come on the wing, but that takes time to arrive at, the eggs, as a rule, being deposited on the Cherry trees in the autumn. The thing is to keep the trees clear of the pests, otherwise Cherries will not be forthcoming fit for use.—G. A.



*Cypripedium niveum.*

Mr. W. Watson, in his book, "Orchids, their Culture and Management," says of this species: "This is a gem amongst Cypripediums. The leaves are small, dark green on the upper side, irregularly blotched with grey, the under side being of a dull vinous red; the flowers are on erect scapes, from 3in to 6in high, solitary, or rarely produced in pairs, and pure, soft, snowy white, save for a few freckles of cinnamon irregularly scattered over the sepals and petals. The appearance of the plant, when not in flower, is very similar to that of *C. concolor*, the flowers of which are yellow. It blossoms during spring and summer, and remains in perfection about a month. It requires tropical treatment, and some broken limestone should be added to the peat and sphagnum used in potting. It is sometimes stated to be a native of Moulmein, but this is an error; the plant is a native of the Straits of Malacca, and is brought to Moulmein by the coasting steamers in exchange for Moulmein Orchids; it has also been received from the west coast of Siam. Figured in the "Botanical Magazine," t. 5,922."

## The Week's Cultural Notes.

There is nothing to be gained by keeping the deciduous *Calanthes* about in their old pots after flowering, and, for the sake of tidiness, they may at once be repotted, this saving time at a more busy season. There are still some growers who adopt various devices, such as boxes of sphagnum across small pots, and other things to start the bulbs growing, but they are entirely unnecessary, and plants potted now into the flowering size will be just as likely to start regularly and well as others potted and repotted again. Besides this, there is no chance of damaging the young roots, of which there is great risk in repotting.

As to the compost for *Calanthes*, I have never been a believer in a quantity of manure. Just a little well-dried old cow manure may be added to the peat and loam perhaps with advantage, but it is better left out entirely than used to excess. Growers often point to the immense bulbs made when the roots are heavily fed with manures, chemical and other, but I have never found that the very large pseudo-bulbs produced made a better flower than medium-sized well-grown ones.

In repotting keep the base of the pseudo-bulbs just beneath the surface of the compost; if a few of the old roots are allowed to remain it serves to hold the bulbs in position, but, if necessary, small stakes should also be used, for nothing is worse than a plant wobbling about at the root. Three fair-sized pseudo-bulbs are enough for a 6in pot, using a greater or smaller number as the pots are larger or smaller. Good fibry loam, three parts, and peat, one part, with plenty of finely broken crocks and chopped sphagnum, will be a good compost, while about half the depth of the pot should be taken up with drainage, the crocks being covered with rough moss.

After potting, the plants may go to a light, sunny shelf in a warm house, and will require no water until they commence to grow. When the weather is fine and the house fairly dry, a light dewing overhead with tepid water from the syringe can do no harm, but as the growths begin to push, even this must be gone about with caution, bright bursts of sunshine in early spring having the effect of damaging the tender foliage, rendering the plants unsightly all the summer.—H. R. R.

## The Pear Famine.

It is said that Pears were never so scarce as they are at the present time, and not for many years have such high prices ruled in the markets for these fruits. There are very few English Pears on sale, and those that are on offer are small and very indifferent. Some very fine Easter Beurrés are coming in from Paris. They are put up in pads holding forty and forty-eight Pears each. Wholesale they are selling at 7s. and 8s. a package. Then there are the fine Glou Morceau, from the same centre; packages of thirty-six and forty-eight fruits are being sold from 8s. 6d. to 10s. each first hand. Choicest samples have made as much as 12s. 6d. At 2s. 6d. and 3s. a dozen they yield excellent profits to the French shippers. It is clear that the public cannot expect to buy Pears this Christmastide except at high and really famine prices. Certain Jersey Pears are fetching 8d. apiece, or 4s. for six, in London.

## Gadding and Gathering.

"HERE AWA', THERE AWA'."

### Three Dessert Apples.

The three varieties are Ross Nonpareil, Mannington's Pearmain, and the sweet little Wyken Pippin. The first and last named are small Apples, the other is of medium size; it is also the more beautiful, having a crimson skin on the sunny side. Ross Nonpareil has a flavour akin to Cox's Orange Pippin; Mannington's Pearmain has also a spiey, delicious flavour; and Wyken Pippin (also named Warwickshire Pippin) is distinctly aromatic, juicy, and pleasantly sweet. In point of flavour these Apples appear to leave nothing to be desired, and this is surely the strongest feature of merit in any dessert Apple. Mannington's Pearmain and Ross Nonpareil are both easy to digest, though the Wyken appears less easy to dissolve. In Messrs. James Veitch & Sons' new fruit catalogue, just published, I find the following reference to the three Apples named:—

**ROSS NONPAREIL.**—Excellent, medium size, richly flavoured, and highly perfumed; a very pretty Apple, covered with russet, and having a crimson tinge on the side facing the sun; this variety, which forms a medium-sized pyramid, will succeed in almost any soil; suitable for orchard culture. November to May.

**MANNINGTON'S PEARMAN.**—Excellent, medium size, juicy and sweet; the flavour is rich, but in order to have it in perfection the fruit should be allowed to hang late on the tree, it being one of the best late varieties; though the tree as a pyramid bears abundantly, it only attains a medium size. November to March.

[It requires a well drained soil.]

**WYKEN PIPPIN.**—Small and handsome, juicy, crisp, and rich flavoured; the tree forms a dwarf pyramid, and bears well; suitable for orchard or garden culture. December to April.

### Floral Decorations.

Now that the Cyclamens are in flower, pot plants can be put to use. In Regent Street, London, a few days ago, I saw an oblong basket, 15in. by 9in., and 4in. to 5in. deep, raised on a pedestal, and having simply a thickly flowered pot Cyclamen in the centre, a tiny Cocos Weddelliana a little to one side, in front, and a bosky setting of Asparagus Sprengeri at the back. Behind all, broad silk ribbons, of a colour that matched the flowers, depended.

A huge circular wreath was composed of Heather, closely pegged down upon the framework, and having an outer and inner fringe of the silver-edged Euonymus leaves, each laid evenly over the other. A large, loosely expanding bouquet of light pink Chrysanthemums, matching the Heather, was fastened at the top (the wreath suspended). From the back of this bouquet hung two broad ribbons, thus screening the vacuum within the circle. Another magnificent wreath was composed of rose-pink Chrysanthemums, with a spray bouquet of pink Erica at the top, and a tiny bouquet of the same, fixed three parts down on the right-hand side. No ribbons or "fringe" was used.

Yet another wreath, and this was furnished with Erica, close laid, and a huge spray of Lily of the Valley, with A. Sprengeri at the top, from which two very broad white silk ribbons were fixed. The ribbons hung obliquely, one to either side, making the shape of an inverted V. Other flowers in use now are Lorraine Begonias, Persian Ranunculi, Roses, Lilium speciosum, Lilac, Carnations, and Gardenias.

In a tall cross—the cross-piece fixed obliquely—were used white Chrysanthemums, set in evenly on the column and cross-piece, and a narrow crescent of Violets slung over the point of intersection of

cross and column. The plinth and base were formed of white Chrysanthemums, with a huge spray-bouquet of Lily of the Valley and Violets entwining the base of the column.

### "Special Lines" at Exmouth.

Mr. W. J. Godfrey, of Exmouth, Devon, grows many other subjects besides Chrysanthemums, including such diversified garden stock as Vines in one direction, with Japanese Rhododendrons and Kalanchoe flammea in another. Hardy fruit trees he also cultivates considerably in a special branch nursery, whilst the best known ornamental shrubs also find a place. The Vines, be it noted, are principally grown to supply Grapes for his handsome seed, bulb, and florist shop in Rolle Street, Exmouth.

Winter-flowering Carnations were seen in considerable numbers at his main nursery in November. Queen of Pinks was throwing abundance of bloom. It is deeper in colour than Duchess of Fife. Godfrey's King is an intense deep crimson, a very free flowerer, and good grower. Mrs. Thos. W. Lawson has quite recovered from the effects of over-propagation in its early career, and at Exmouth, as elsewhere, its brilliant colour and finely fringed large flowers were amongst the best in the collection. Beauty of Exmouth is another fine variety. Roses, too, are represented by the latest novelties, Liberty seeming to do especially well. Zonal Pelargoniums furnish a feature here, and such reputed sorts as Duchess of Cornwall, of a pale salmon and flesh colour, was represented in large batches. The trusses are large; the colour is exceedingly pleasing; it is floriferous, and the habit is dwarf and sturdy. Alice of Venensis, with its white centre and scarlet edge, was also very brilliant.

The Show and Fancy Pelargoniums find more than the usual recognition, a fact which affords one satisfaction to chronicle. Is it because these plants require a trifle more attention than some other plants do to grow them well, that they are not more liberally taken in hand? Novelties amongst Heliotropes were noted. The newer Heliotropes have larger flower heads, and afford a variety of colour, from white to purple, and they are dwarf and fragrant. Amongst other plants that enjoy special prominence are Callas. These brief

notes refer to Mr. Godfrey's main lines in nursery stock, and it must suffice to say that he manages them as successfully as he does Chrysanthemums. — WANDERING WILLIE.



*Cypripedium niveum.*

## Flowers and Vegetables

London, happily, is in no likelihood of suffering from a vegetable famine this Christmas such as is just now causing dismay in Paris, though the increased prices obtained at Covent Garden for many vegetables and fruits showed the effects of the recent severe weather. A few special forced things were indeed costly. In the vegetable market good Potatoes are very scarce, and 1s. 6d. to 2s. a cwt. dearer than usual. Ordinary French Asparagus is now 7s. 6d. a bundle, but the epicurian Asparagus of Argenteuil cannot be got there under 35s. a bundle, and is sold in London at 42s. and 45s. a bundle. Haricots Verts have gone up 4d., and are now 1s. 6d. a pound. English Beans are 2s. a pound. French salads have been practically off the market altogether, because they have reached London frozen, and consequently useless.

English Apples are very scarce, and Cox's Orange Pippins, the favourite dessert Apple, are 4s. a dozen. On the other hand, Grapes are

cheap, and Nuts are much cheaper than at last Christmas. Cob Nuts are 6d. instead of 10d., Brazils 7d. against 9d., and Almonds 6d. instead of 7½d. Oranges also are cheap. Flowers, too, were very dear. The funeral of Colonel McCalmont had caused an enormous demand, and prices, which had already been made high by the weather, reached a point quite 50-per cent. above the normal average.





### N.R.S. Annual General Meeting.

The twenty-sixth annual general meeting of the National Rose Society was held in a room of the Hotel Windsor, in Westminster, on the afternoon of Thursday, December 11. The weather being agreeably cold and healthful, a goodly number of members signed the book, the full attendance being as follows: Charles E. Shea, Esq. (in the chair), with Messrs. Joseph H. Pemberton, E. B. Lindsell, John Strange, H. Shackleton, G. W. Cook, John Ballmore, Thos. B. Gabriel, C. Holbrook, Conway Jones, G. Gordon, Maxwell T. Masters, Geo. Paul, Chas. Hayward, Ed. Mawley, H. S. Bartlett, A. Savage, C. Cape, W. Gaseling, R. Harkness, K. H. Gifford, Ed. J. Holland, A. Turner, H. E. Molyneux, E. T. Cook, G. Moules, T. N. Flintoff, H. J. Spooner, J. R. Mattock, R. Foley-Hobbs, F. Page-Roberts, Clifford Chadwick, H. P. Landon, Richard E. West, L. G. Pawle, F. Cant, F. Wellesley, R. Powley, G. W. Piper, F. Dennison, and A. C. F. E. Prince.

The preliminary business having been disposed of, Mr. Frank Cant and C. B. Gabriel were appointed scrutineers of the ballot for the annual election of officers. (The names of officers that appeared on the balloting list, sent out to each member prior to the meeting, was adopted, with the addition of the Lord Provost of Glasgow and ex-Provost Mitchell to the list of vice-presidents.)

The report of the committee and financial statement for 1902 was then presented, the latter being read first, owing to Mr. C. Hayward, the treasurer, having to leave the meeting early. The report is given hereunder:—

#### Report of the Committee for the Year 1902.

In presenting their report, the committee congratulate the members upon the increasing influence and prosperity of the society. The only drawback during the year was the much smaller sum received in gate-money at the exhibition in the Temple Gardens as compared with the previous year. This, however, is a drawback to which all horticultural societies holding independent shows are at times liable, and which is only seriously felt when there is no substantial guarantee or reserve fund to fall back upon. The committee are of opinion that the smaller attendance of visitors at the society's Temple Show is only to be accounted for by the general depression which at that time prevailed throughout the country owing to the serious illness of the King. All public functions of a similar character held during the early part of July appear to have suffered in the same way.

The flowering season proved this year so exceptionally backward that, even as late as Midsummer Day, fears were entertained that there would be but few Roses available for the Temple Rose Show. Fortunately, warmer weather set in soon afterwards, with the result that that exhibition, although by no means a large one, proved the most varied in arrangement and enjoyable that the society has yet held. Taking the number of exhibition Roses as a guide, it was the smallest metropolitan show since 1893—or for nine years.

The committee thankfully acknowledge their great indebtedness to the Treasurer and Benchers of the Inner Temple for again granting the society permission to hold the exhibition in their gardens. Their thanks are likewise due to the President and Council of the Royal Horticultural Society for so generously placing the Society's staff of assistants, including Mr. S. T. Wright, the superintendent of the Chiswick Gardens, at their disposal on the show day. To those members who rendered such substantial help this year by their promised contributions to the Temple Show Guarantee Fund, amounting in all to £360, the committee feel that their thanks are specially due.

The southern show, which took place at Exeter two days after the metropolitan exhibition, was, owing to the lateness of the season, also an exceptionally small one. On the other hand, the show at Manchester proved unusually extensive; indeed, with only four exceptions, it was the largest exhibition that has yet been held by the society in the provinces. Taking together the average quality of the exhibits and the number of them, it must be regarded as having been the finest Rose show of the year. The arrangements made in connection with both exhibitions reflect great credit respectively on Mr. G. D. Cann, the secretary of the Devon and Exeter Horticultural Society, and on Mr. P. Weathers, the curator of the Royal Botanic Gardens at Manchester. The success of these exhibitions was also in a great measure owing to the kind exertions of two of the society's vice-presidents—Mr. Peter Veitch, who

acted as the society's representative at Exeter, and Mr. James Brown, who, with equal energy and tact, furthered the society's interests at Manchester.

During the course of the year a new edition of the "Hints on Planting Roses," brought up to date, and also an entirely new edition of the "Official Catalogue of Exhibition and Garden Roses," compiled by a special committee appointed for the purpose, have been published and issued to the members. The necessity for reprinting the above and other publications of the society so soon has arisen through the exceptionally large increase of members during the last two years, which could not have been foreseen when the last editions of those publications were printed.

The committee regret to announce the loss through death of Mr. Charles J. Grahame, one of the society's vice-presidents. Mr. Grahame had for many years taken the keenest interest in the welfare of the society, and was at all times its most generous supporter. He will, no doubt, be best remembered for his energetic action in bringing about the adoption of the regulation that requires amateur exhibitors to show according to the number of plants they grow, a regulation which has worked well, and has now been in force during the last ten years.

It is with the deepest regret that the committee record the resignation, in February last, through failing health, of the Rev. H. Honeywood D'Ombrian, the founder of the society, and for twenty-five years its senior secretary. Throughout the whole of that period his labours have been untiring, and the committee cannot but feel that the present satisfactory position of the society is in a great measure due to the ability, energy, and tact unremittingly displayed by him on its behalf. At the committee meetings of the past year, as well as at the Temple Rose Show, his genial presence has been greatly missed. Mention should also be made of that semi-official publication of the society, "The Rosarian's Year Book," of which Mr. D'Ombrian was the editor during the whole period of his secretaryship—the issue of which has now, unfortunately, ceased.

As Mr. Wollaston will in future be residing away from London during the winter months, he has reluctantly tendered his resignation as one of the hon. auditors of the society. In accepting this resignation, the committee take the opportunity of thanking Mr. Wollaston for his kind services as auditor during the past seventeen years.

#### FINANCE.

Although the receipts at the last Temple Rose Show fell short of the amount taken at the previous exhibition by £150, it has only been necessary to draw upon the guarantee fund to the extent of £90. That a larger sum was not required has been almost entirely owing to the large amount received this year in new subscriptions. The net gain, as in the preceding year, has been 150 members, thus bringing up the aggregate number of members to 890. The total receipts amounted to £1,248 4s. 3d., and the expenditure to £1,233 5s., leaving a balance of £14 19s. 3d. to carry forward to 1903.

#### ARRANGEMENTS FOR 1903.

The metropolitan exhibition will again be held, by the kind permission of the Treasurer and Benchers of the Inner Temple, in the Temple Gardens, on Wednesday, July 1. There will be no southern exhibition next year, but arrangements have been made to hold the northern show in St. Andrew's Hall, Glasgow, on July 15, in conjunction with the West of Scotland Rosarians' Society. The only previous occasion when the society has visited Scotland was in 1887, when a most successful exhibition was held in the Waverley Market, in Edinburgh.

#### MEMBERS' PRIVILEGES.

Members subscribing one guinea will be entitled to six 5s. tickets, and subscribers of half-a-guinea to three 5s. tickets of admission to the society's exhibition in the Temple Gardens; or, if preferred, any of these tickets may be used instead for the society's northern show in Glasgow. Members joining the society for the first time in 1903 will also receive copies of the following publications: The recently issued edition of the "Official Catalogue of Exhibition and Garden Roses," the new and revised edition of the "Hints on Planting Roses," the "Report of the Conferences on Pruning and Exhibiting Roses," the "Report on the Constitution of Rose Soils," the "Conference Report on the Decorative Use of Some Garden Roses," and to a symposium on "How to Grow and Show Tea Roses." Members alone are allowed to compete at the shows of the society. Members will be entitled to purchase tickets for their friends for the Temple Rose Show at reduced prices.

In conclusion, the committee desire to convey their best thanks to the donors of the numerous special prizes which were this year presented to the society, and especially to Captain Ramsay for the handsome prize he again offered at the Temple Rose Show, in what has now become one of the most popular classes in the exhibition. The local secretaries have again done good service, and more particularly Mr. H. S. Bartlett and Mr. H. E. Molyneux. To Miss Willmott the thanks of the committee are

especially due, for in no other year since it has been established has any member succeeded in obtaining for the society such a large number of new and influential subscribers.

The chairman moved the adoption of the report, and said that it was rather an optimistic document, but this was excusable for a society determined to succeed as this was. They must not let little clouds on the horizon repel their endeavours. There was, indeed, very satisfactory progress, for 150 new members had been enrolled. They should keep this in mind, whatever may have been the loss in gate-money at the show. They had now a larger membership than ever before in the history of the National Rose Society. They must not adopt the idea that they had got beyond the experimental stage of the Temple Show. They saw a drop in the receipts of £150, and the committee points out to certain causes affecting this. For instance, the Holland House Show coming before their's, many people thought they had enacted their obligations to the Queen of Flowers when they had visited it. Mr. Shea, continuing, thought that a reserve fund would be better than a guarantee fund, but there was a greater fund—The Public—and the society must cater for the public taste. He had heard among his friends, as, doubtless, so had his listeners, that they (his friends) don't care to see serried ranks of flowers. The number of non-competitive growers of the Rose, compared with those who exhibited, were as 100 to 1. He should like to see bolder and finer effects, similar to those at continental exhibitions; and if this was advisable, no doubt the Trade could bring in tall pillar Roses, and garlands of them, and furnish these bolder groups.

With regard to an autumn show of Roses, the propositions he likened to seed sown, which had only to be watered. The society had presented its members with a new catalogue—one much wanted, and very admirable. Touching on the death of Mr. G. J. Grahame, Mr. Shea said there was also a sad side to everything joyous in this life. Mr. Grahame had always been the champion of the weaker men, of the small exhibitor against the large. Mr. D'Ombraïn, too, whom he might call the Nestor of Roseland, was now unable to be with them, and he knew it would be in accordance with the desire of everyone present that a sympathetic message be conveyed to Mr. D'Ombraïn, wishing him a continuance of fair health and happy days. The motion was seconded by Mr. Geo. Paul, who supported the idea of establishing a reserve fund, but thought that for another year at least the guarantee fund should be maintained.

The Rev. Jos. H. Pemberton spoke to the report. He referred to the weight of expenditure over receipts, and said that guarantors could not always be asked to come forward. As to the increase of members, that also meant that more tickets had to be given away. He advocated having a two days' show, arguing that from newspaper reports people would learn of the show, and come in crowds on the second day, thus greatly augmenting the gate-takings, while the expense to the society would be but little increased. At the show of this year the flowers were perfectly fresh when the meeting closed, and he added that, if it was good for the Royal Horticultural Society to have a two days' Rose show, it was also good for their own. Mr. Pemberton desired an alteration in the date of the Temple Rose Show. This year, he said, the show was the smallest they had ever held. Within two days of the show many had said to him that it was not possible there could be a good show at so early a date, and they did not visit it. Then, again, it had been suggested that people had left town in either the first or second week of July, but he contended this was not so. The show, moreover, should be national in its representation, and not merely metropolitan. Mr. George Gordon seconded. By having a two days' show they would ensure, he thought, the greater support of country members, and more gate-money to boot. He pointed out that some of the provincial Rose shows lasted for three whole days, and concluded by saying that if the society had to bear the loss of £150 in one year the members might know what would happen sooner or later. Mr. Gordon desired to have Regulation II. expunged, but it was suggested that this should form a proposition by itself.

The next speaker, Mr. Frank Cant, took the opposite side to the two foregoing. He thought that the last Temple Show was far and away the best ever held. He asked: "Do the subscribers hail from the north or the south?" and answered by saying, the south, amid a conflicting chorus of "Yes!" and "No!" The flowers of southern growers were perfectly ready by July 1. Mr. Geo. Paul did not think it fair to country societies if the N.R.S. altered its date, because many societies would have fixed their date in consideration of the metropolitan exhibition. An alteration of date would mean a clash with others.

Mr. E. B. Lindsell supported Mr. Pemberton, and thought it would be wise, for the sake of midland and northern growers, if a later date was chosen. From a secretary's point of view, Mr. Mawley preferred the later date as likely to be the more successful. Mr. G. W. Cook thought it better to leave the matter in the hands of the committee until they had seen the benchers of the Inner Temple.

A country member here rose, and referred to the year 1893, when southern Roses were nearly past by July 8. Mr. F. Cant asked if he might make another remark, which was, that an early show be held one year and a slightly later show the year after. Some of the older rosarians pointed out that such was virtually the arrangement years ago. Mr. Pemberton's amendment, altering the date of the metropolitan exhibition in the report from July 1 to July 8, was now put to the meeting, when the votes were: 16 for, 17 against—a bare majority of one. The report having been so far discussed, it was adopted unanimously.

Mr. George Gordon now formally proposed that the exhibition held in the Temple Gardens extend over two days, and to enable this to be done, that Regulation II. be expunged. The chairman suggested that the Regulation need only be altered to read: "extend over two days." Mr. Gordon agreed, and his proposition was seconded by Mr. Pemberton.

Mr. Mawley demurred. He said that at the last annual general meeting this question was discussed, and *only five hands* were held up in its favour. He pointed out that, so far as gate-takings were concerned, the Royal Horticultural Society's earlier Temple Shows were very unsatisfactory and risky, but that latterly they were quite successful, thus suggesting that the N.R.S. might follow suit. They had not really given this one day's show a fair trial, and this year had been a very bad one for the show.

Mr. O. G. Orpen thought that if the N.R.S. started holding two days' shows the country societies would be doing the same, and as the majority of the exhibitions at the present time have to be got into about sixteen days, the Trade and amateur exhibitors could not afford to attend nearly so many. Following him was an unknown member, who said he would rather pay double subscriptions than that they should come to adopt the two days' show. Mr. F. Cant remarked that it would be necessary for exhibitors to double the number of their boxes and to have double the number of men in order to attend other shows. Mr. G. Paul was not in favour of the two days' show. Mr. Shea then put the proposition to the vote, when there were 16 for, and 21 against, a majority of five. Thus it would seem that the idea is making advances.

Mr. John Strange now proposed: "That the thanks of the society be given to the officers and other members of the committee for their services during the year." He expressed the opinion that the society was fortunate in having such an able and assiduous secretary and so excellent a chairman of committee. Regarding the distance which many of the committeemen had to travel he thought their attendances most exemplary, and the spirit they showed was most praiseworthy. Mr. H. S. Bartleet seconded, and Mr. Mawley responded, mentioning especially Mr. D'Ombraïn. He also commended the special work of the treasurer, and quoted some figures to show that the pulse of the society was true and good. The subscriptions in 1898 amounted to £373; in 1899 to £384, a gain of £11; in 1900 to £391, another gain of £7; in 1901 to £458, a gain of £67; and in 1902 to £566, a gain of £108.

The following alterations in Bye-laws 3, 5, and 7, and also in Regulation 3, to the effect that the word "secretary" be substituted for "secretaries" wherever the latter word occurs, was proposed by Dr. Shackleton, who said this was simply a clerical alteration. Rev. J. H. Pemberton seconded, and it was agreed to.

A discussion of some length turned upon a proposed alteration to Regulation 13. The matter had been in the hands of a sub-committee, but they had not been able to come to any definite conclusion. The notice, as given hereunder, was placed in the hands of each member present:—

"In the absence of any definite resolution being agreed to by the sub-committee appointed to consider the question, Mr. O. G. Orpen will propose the following resolution at the general meeting on the 11th inst.: 'That Regulation 13 be altered to read as follows—The Gold Medal of the society may be awarded to any seedling Rose or distinct sport, whether raised in the British Isles or elsewhere, and the variety for such an award must be exhibited by the raiser or by the introducer, and the Medal shall go to the exhibitor. If exhibited by the introducer, the Medal must go to him as such, and the raiser's name and address, if known, must also be stated on the award. No variety shall be eligible to receive a Gold Medal if distributed earlier than *May 1* of the year in which it is exhibited for such an award, and no variety which has won the Gold Medal at an exhibition of the society, can again receive this award at any of the society's exhibitions.'

Mr. Orpen said the matter opened up a wide field. The sub-committee agreed that a Gold Medal should be given to meritorious new Roses. The next matter was as to when new Roses were to be introduced. Mr. Orpen had proposed May 1, as this would equalise growers who may have secured the right of use of a certain stock, and they would then be able to show in good condition for a Medal the next year. The chairman stopped the speaker in order to get a definition of the word "introducer." He asked that, if



two or three buyers secured a stock of the one variety, who would be "the introducer?" Mr. G. Paul suggested using the words "sender-out," as being more expressive. After discussion, however, no agreement was come to, and the matter went back into committee for general consideration, and to be brought forward at the next annual general meeting.

Mr. Mawley read letters from Glasgow, desiring that the date of the northern exhibition be made Wednesday, July 15, instead of Thursday, the 16th, that date being less suitable as a visitors' day. The change of date was agreed to. A Gloucester member, Mr. Conway Jones, said he had been deputed by his local society to ask the National Rose Society whether it could fix Gloucester as the place for its southern show in 1904. Mr. Mawley replied that Sutton, in Surrey, had already been mentioned for 1904, but they would bear Gloucester in mind. The meeting then terminated with a vote of thanks to the chairman.

#### The Annual Dinner.

Following the general meeting, which lasted from half-past three to half-past five, was this pleasant social gathering of rosarians and their friends. A number of those who had attended the afternoon meeting were unable to stay to dinner, but others evidently took their place, and each chair around the tables was occupied. Mr. Edward Mawley, the secretary, was in the chair, and on his right hand was Mr. Harman Payne, foreign corresponding secretary of the National Chrysanthemum Society. The tables were decorated with Roses contributed by Mr. Geo. Paul and Mr. Geo. Mount, and dishes of Apples from Mr. Geo. Bunyard. The names of the Apples had been also sent, and there was quite an examination at the writer's part of the table, on the respective flavour-merit, of some of the varieties. Ross Nonpareil was accorded a high place as a small dessert Apple. The arrangement of the Roses, too, was of interest, inasmuch that they separately appeared to be mystically standing erect, or inclinedly, without any support. The secret was that half-needles had been fixed here and there along the centre of the table, and the soft base of the pithy stems of the Roses had been pressed down upon them. The idea is novel, and well worth the noting.

After the loyal toasts were acclaimed and drunk by the company, and various vocal selections rendered by the Venetian Part Singers and Madam Marion Harris, the chairman proposed a toast to the National Rose Society. In his remarks he stated that the founder of the society was absent on that occasion for the first time during twenty-five consecutive years. Nor was Mr. J. D. Pawle able to be among them, whose well-known presence had hitherto been relied on at the dinner. Mr. Mawley regretted also the absence of Mr. Cecil Cant, and trusted that he would soon recover from a dangerous trouble. Those suffering from colds, fashionable at this season, included such warm supporters as Mr. George Bunyard, Mr. George Mount, and Mr. Jefferies, and who were unable to be present; but he was pleased at the same time to see so many others around him in this "Christmas-Rose-like" weather.

Mr. Mawley then went on to say that it was, naturally, rather galling, after a quarter of a century, to find their expenditure exceeding their income. The society had had a peculiar career. Until two years ago they had jogged along, leaving the risks of the shows to others; but now they had started a speculative "business." They had an increasing membership, and soon there might be 1,000 on the books.

He told a story in contradiction to the usual advice "to cut your coat according to your cloth," the moral being that the coat might thereby be either too small or much too large. The adage must not be taken too literally. Nor must the National Rose Society's regulations be accepted ad verbum, for they had one which said: "All flowers must be staged as cut from the plants," and the chairman thought many of the flowers would look poor indeed but for the quarter of an hour's dressing.

Mr. Mawley said their "speculative show" was very expensive, amounting to £640 during the last two years. Turning to the question of catering to the taste of the non-exhibiting member, he thought they should not forget that it was from the ordinary grower that most of the prizes came. Such members were not always fond of flower shows, but they were fond of those little books the society provides—books on Rose culture. Roses are exceedingly popular at the present time, and this was because gardens now-a-days might be all Roses, and in bloom from early summer to winter by a wise selection of the different sections.

The toast of "The Visitors" came from Mr. G. Paul, coupling with it the name of Mr. Harman Payne, who, as Mr. Paul banteringly remarked, had been reported to have said that the N.R.S. was mostly composed "of old maids and country parsons." Mr. Harman Payne (an Officier du Société Mérite Agricole), in his charming style, soon put himself right with the members of the Rose Society. The toast of the "Horticultural Press" was proposed by Mr. F. Cant and responded to by Mr. G. Gordon. The very pleasant meeting broke up about nine o'clock.



#### The Horticultural Hall.

I trust I am not too late to take part in the debate on this matter. What I and a good many others desire to know is, Will the average gardener assist the funds? Unless he be a Fellow, there are hundreds of good gardeners who have never seen the inside of the present hall, and are just as likely never to see the inside of the new one; yet they would give their "brick" for the sake of "our common cause," the advancement of horticulture. I think there should be a museum somewhere in the new building, and a meeting room for country gardeners who are not Fellows, but who are willing to subscribe to the new hall. We should have a hall for the United Kingdom, not a metropolitan affair, but a headquarters for all genuine "blue aprons," whether as head gardener to a Duke, or a single-handed gardener to a doctor. Is the Council willing to offer outsiders (I mean non-Fellows) something in return for their "bricks"? I propose that every gardener in a situation gives at least a florin, and every man under him a shilling; he, or they, to give more if so disposed, and where possible to ask their employers also to subscribe. I think that if the Council would make it clear what benefit the non-Fellows would derive from the hall, "bricks" would come in much quicker, and maybe a bit of granite for the front. At any rate, the writer's "brick" and his men's are waiting to see what the Council offer.

Bournemouth.

C. S. RITCHIE.

#### The Bothy Plan Competition.

I have taken great interest in the bothy plan scheme from the beginning, and hope that the idea will be a success, and will find many competitors. The higher amount stipulated in your last number as the maximum cost of the building will have freed some competitors from difficulties on this point. [Note that the cost must not exceed the amount stated, though it may be less.—ED.] As you say, it may not be a difficult matter to draw a suitable plan, but it, nevertheless, requires great forethought, and such work, it must be remembered, is the means of gaining a livelihood for many persons. To persons not acquainted with building it is not quite so easy as it looks; the part I cannot comprehend is what is termed "general items." How is a person quite uninitiated to give an estimation of the general items of a building when there is such a lot to know about the business? Why, if the "common" journeyman can do such work off-handed (?) he would, I venture to suppose, find work in another atmosphere! [See footnote.—ED.] There is much to be taken into consideration to be able to give a satisfactory estimate of general items, and is unusual in such a case (?). A certain figure is stated, and then circumstances make the profits variable, and it is the profits that a business man must look to. I asked two men, an architect and a builder, what they would charge me for "ideas" and "a plan"; they both said the lowest they could do was half-a-guinea. How many bothyites can afford to pay that sum for help, and get no prize perhaps? It will be those fortunate ones who have friends in the line that will have the best ideas, and therefore stand a chance of obtaining a prize; but I do hope those who love the work and yet cannot afford to pay high prices, or have no influential friends, will send in a plan, for it is plans from the bothy that will be looked for. Mr. Editor, is that not so? I trust it will be those plans that will be considered, with respect to the circumstances under which they originated; for it is hardly possible for a gardener to be able to compete with an architect, or vice versa. By all means state a figure as to cost, but if "general items" is made law I know one who will be thrown out.—W. H. RABJOHN.

[The above is a remarkable letter in this, that the writer of it seems to have missed the points which we have tried to lay down in our solicitation for a bothy plan. We agree that it requires "considerable forethought" in order to produce a meritorious plan, and we had no conception that "a common journeyman" would ever think to produce a plan "off-hand." It was partly in order that competitors might have time to duly investigate the matter—which experience should be invaluable to a gardener—that the final date of closing the competition was deferred. Our correspondent is wrong in saying that it is unusual to furnish an estimate of cost when a draughtsman submits a plan. What value would attach to a plan if it did not qualify with the stipulated cost? In his next point, the

writer informs us that: "I asked an architect and a builder what they would charge me for 'ideas' and 'a plan,'" and this on the face of what we published last week, that "the sender will alone be held responsible for it." We sincerely trust that many of the plans will come "from the bothy," and hope that they will be individually the work of the person who sends them, else where can the honour be placed? What we have termed "The general items of cost," includes the bricks and stones required, the timber for the construction, and plaster for the walls. The bothy equipment would not be included in the cost of the building itself.—Ed.]

### Illegal Showing.

This question, unfortunately, is not so much that of where illegal practices are, as it is that of where they are *not* in vogue. As Mr. Raillem hints, honest men as exhibitors are very backward in coming forward in the matter; so much so, indeed, that some who have found their efforts handicapped by the clubbing processes of a clique have dropped out of showing altogether, and others have copied the nefarious tactics in order to fight an enemy with his own weapons. I do not think my experience is unique, but I do think that some may consider such assertions too vague, requiring substantiation by facts. These I am quite prepared to give, under the seal of confession, to our Editor, and in such a manner that he can, if necessary, test the *bona fides* of my statements. "R. M.'s" letter, on page 541, is very much to the point; but he, too, ignores an important factor in the question, viz., those who have the evidence are generally minus the power and position to use it; or, at least, that is their feeling on the matter. Mr. Raillem, on same page, generously recognises this, inasmuch as he calls it "a serious matter for one in a dependent position to bell the cat," and very pertinently deplores "a little want of pluck" originally. However, it would, I think, be as hard to trace its origin as it is to predict its end. Probably it began at the first flower show, and, possibly, it will only end with the last; but, doubtless, Mr. Raillem's suggestion "that honest men in each society put their heads together, stand by one another, and put forward a general motion without reference to any individual case at the annual meeting" would be a step in the right direction; and if they would, or could, induce a few of the big sinners to join them it might be another, for to give a man credit for what he is not sometimes stimulates him into being what he ought to be. A roundabout method, truly, but, in view of past discussions and abortive results, no shorter cuts to integrity in showing present themselves to the mind of—K. D.

It is not only too true that illegal showing is too much practised, and all who have the interests of fair play in competition should endeavour to bring the force of public opinion to bear in trying to check it. Nobody who has had anything to do with shows in an official capacity, or who is constantly coming across other horticulturists who are exhibitors or friends of theirs, can say that this illegal showing is non-existent, or only carried on to a small extent. It prevails in many show districts, and is so insidious in its ways that it is almost impossible to check it. The attempted remedy or precaution, taken by many societies, of reserving power for the committee to visit the gardens of exhibitors is but little called into operation, for the simple reason that it is difficult to secure anyone to perform this invidious duty. In many shows the greater part of the work after the entries have been taken falls upon the secretary, and he has no time to visit gardens then. At the same time, I have seen this power exercised to advantage, and can in particular recall one occasion where a visitation was made with a good result. One of the vice-presidents of a certain show visited the garden of an exhibitor who had entered Asters, and found that it was impossible that any of the flowers in his bed of these plants could be open in time for the show. He made no remark until the morning of the show, when he observed the exhibitor in question setting up a board of capital Asters. He spoke to the man, and told him that he had not grown these flowers, and that he would lodge a complaint with the secretary if they were not taken away at once. The exhibitor waxed indignant, but the vice-president was firm, and the flowers were taken away before judging began. It is a pity that the complaint was not formally lodged, as the result would have been good for all concerned. This system of visitation, while good enough for small local shows, is impracticable for open ones, as no plan of the kind could ever be carried out with them.

But I do not think that the honest exhibitor need object to this visitation; in fact, in many cases he would welcome it, as he is sometimes wrongfully accused in local gossip. I know of a recent case in which a show secretary heard some men discussing an exhibit of a certain vegetable, which they declared could not have been ready for cutting at that time in the district. The official interposed, and told them that the second prize one

was grown in a garden close to his home, and that he could show them the plant from which it was cut. Unfortunately, there are many men who aid and abet the dishonest exhibitor, and who seem rather to take pride in telling that some of their vegetables, fruit, or flowers were away to such-and-such a place to be shown at a flower show by a certain person. There are also some trade growers who will supply exhibition blooms without asking any questions, but knowing all the time that they are for competition. Now, all these things point to the need of preaching a higher code of what we may call "show morality," and the thanks of all who wish well to horticulture are due to the opener of the subject in your lively columns devoted to "Our Readers' Views." It is best to call a spade a spade, and to say that no amount of sophistry will alter the nature of the practice, which is simply a fraudulent one. The winner of a prize by such means is on a par with the criminal who obtains money or property under false pretences.—A SECRETARY.

### Sweet Potatoes and Yams in the West Indies.

During the period of stress which our sugar-growing Colonies in the West Indies are passing through, pending the abolition of the foreign sugar bounties, the attention of the planters has naturally been given to other produce. In Barbados great success has been achieved in the cultivation of Sweet Potatoes (*Ipomœa Batatas*) and Yams (*Dioscorea sativa*) of the very best quality, and an endeavour is now being made to introduce these into this country. The Sweet Potato is a cheap and palatable vegetable, but a good Yam is a positive luxury. During a long residence in London I imported several barrels every year for my own use, and out of the numerous guests who tasted them at our table there was not one who did not highly appreciate them. I may add that here the flavour is even more delicious than in the West Indies, as butter, which is a vital ingredient in a well-cooked Yam, is so much better. I am returning to Barbados almost immediately, but any information on this subject is easily obtainable from the regular importers. Receipts for various ways of cooking both Sweet Potatoes and Yams are sent out with every parcel. I shall esteem it a great favour if you will kindly insert this letter in your journal.—FORSTER M. ALLEYNE, Member of the Legislative Council of Barbados.

### Pear, Gris de Chin.

Your readers may possibly be interested in having an authentic account of this Pear, which received an Award of Merit at the latest meeting of the Royal Horticultural Society. [Owing to our having had a faulty list of awards from the Fruit Committee's table, the Pear was not recorded in our report of the show.—Ed.] Tempted by the voluminous Pear catalogue of Mr. L. Van Houtte, Ghent, some thirty years ago, I closely analysed the glowing characteristics of what the catalogue extolled as the "crème de la crème" of Pear individuality by the most persuading of adjectives. I knew all our most prized favourites, and yet found the merits of such as, for instance, Marie Louise, Thompson, Doyenné du Comice, &c., sorely occulted by seductive characters attributed to quite three dozen sorts out of an army of not less than 800 varieties, that former selection being entirely unknown to me and to British pomology generally. I ordered a tree of each of the selection of some two scores of a series of reputed prodigies, but, alas! never came to realise my dream of the future possessor of exquisites. One after the other these precious Pears were discarded as worthless, and the only gem was Gris de Chin, now brought to general notice by me. A few years after my early acquisition even this genuinely meritorious subject disappeared from the Belgian catalogue, and I never noticed the name anywhere since. As we are told by some other nation that Shakespeare's worth was made known to us by them, might be we can emulate it by re-exporting Gris de Chin to Flanders, even with greater justice.

Being told of the disappearance, for purposes of belated reporters, of an exhibit that had been identified but had emerged sadly diminished from under the hands and palate of a whole score of conscientious and appreciative judges, who, just for appearance sake, left one specimen on the plate to my own certain knowledge, and which was undisturbed even an hour after, we can only surmise that a December wasp, if not hornet, made off with the balance and disappointed your reporter. For, as it happens, it is a fact which speaks volumes as to the excellence of the fruit—the presence of much saccharine in this variety supplementing its highly pronounced richness of flavour and juiciness, its buttery character (although the product of a bush in the open), all elements which rendered it an object of lively interest to wasps—when in September-October the crop approached maturity these same wasps actually despising Marie Louise, Doyenné du Comice, and Thompson growing by the side in excellent condition.—H. H. RASCHEN, Sidcup, Kent.



## Pruning.

Showers of leaves in many shades of colour, from golden yellow to hues of russet brown, are falling on lawn and meadow, in wood and plantation. The hedgerows are thinning rapidly, and soon the arms of the giant Elms and Oaks will be flung abroad, bare and devoid of their leafy mantle. At such a time the gardener turns to thoughts of saw and knife, and perhaps also a pair of secateurs. It is necessary that one and all be in readiness when the time is at hand. Some of us would fain see a far greater portion of this work of pruning performed before the foliage commences to fall, but too well do numbers of us know how many other things there are that cry out for attention when we would be pruning which cannot be left undone.

For several years I have noted the advantage derived by trees that have been summer-pruned, and have not hesitated to take whole branches from old basin-shaped trees, both Apples and Pears, when in full leaf. A better idea of space needed may in this way be obtained, far better than when the trees have lost their foliage, and there is nothing but bare twigs and stems for the workman's guidance. As for the dreaded bleeding sometimes talked of, I have seen nothing to fear in this direction from any reasonable operations carried out in summer. This summer-pruning has always tended (at least, in my experience) to thoroughly ripened wood and highly coloured fruit. It, of course, is only within the bounds of common sense to expect such results, from the greater freedom with which sun and air may thus exert their genial influences on growth and fruit. Provided there is a fair balance between root and branch, and summer-pruning is carried out so that the back or basal buds are not forced into incipient growths, that must of necessity be insufficiently ripened, there need be little fear as to crops if the weather at blossom time be at all favourable.

Many times I am asked: "Will you come and look at my Plum tree?" or, it may be, "my Apple tree?" Certainly, one is always willing to oblige friends in these matters, but I always endeavour to dissipate any mystery there may be in the minds of people as to this matter-of-fact operation. Pruning seems to me a matter that calls for the exercise of plain sense and decisive action as much as, or more, than any other work a gardener has to do. The skill which comes from practice and observation, and which is requisite where large numbers of trees have to be dealt with, is not so needful to the amateur as may at first sight appear. We all know that the branches of a tree should be disposed far enough apart for air and sun to pass freely through and amongst. With a little thought it is not a difficult matter to steer a middle course between the method of him who snips a bit here and a bit there, his trees ultimately becoming a thicket of unprofitable growth, and he who mercilessly hacks and saws, leaving great jagged wounds and gaps, thus utterly spoiling the contour, and even appearance, of his trees and bushes. It should be remembered always that after pruning with a saw the knife should be brought into use for paring and smoothing the rough surface left by the saw; this is of great assistance in healing the sore place. In the matter of thinning and opening the centres of trees which have been for some time neglected (this, of course, is an operation more frequently needed by old trees), it is wise to give a thought in the growing season after they have been so treated. I have a tree in mind, which two winters ago was thinned out in the manner so often advocated in these pages. At every place where pruning was done there have sprung from three to half-a-dozen young shoots. Now, the last stage of this tree is worse than it was before. These young shoots should have been ruthlessly torn from their sockets when a few inches in length, and much trouble would have been thereby saved, besides the benefit that would naturally have accrued to the tree.

I have thus far spoken of outside work in connection with pruning. I should like to supplement these remarks with a few observations as to inside work in relation to Vines. We may see, in fact often do see, old Vine rods spurred back year after year without the slightest attempt being made to bring up young canes from the base of the old ones—a comparatively easy matter. Some few years back a house of Black Hamburghs came under my notice, in which the Vines had been cut closely back on the one bud idea for many seasons. They had, indeed, become so decrepit that they would scarcely produce Grapes at all, yet by lighter pruning, viz., shortening the laterals to where a good plump bud could be found, some very fair bunches were produced in the first season by the old stagers. In the meantime young rods were started from the base, and as these attained their full measure of strength the old rods were gradually taken out, the bottom spurs being first cut clean away. Proper treatment was meted out to the roots, and in a few seasons the regeneration of these Vines was complete. Many would be inclined

to say: "Less trouble to take them out and replant new canes." Except in the case of very old Vines I am doubtful if this would be true.

There is also the matter of root-pruning, which has received no lack of attention from time to time in the Journal. It must ever be remembered that, prune we never so well and wisely the branches of our trees, we but aggravate the evil of superabundant growth if the roots are too active or are working in an unsuitable medium. Often attention applied to the roots will prevent in a great measure the use of the knife on the upper portions of fruit trees.

In conclusion, I can only say to the novice that a knowledge of the difference between wood and fruit buds must of necessity be acquired. That some thought must be bestowed on the placing of the top bud, so as to mark the direction of the future shoot. That strong growths should not be pruned as severely as weak ones, and, above all, sound common sense must be bestowed on each tree as to its form and shape in the time to come. There is nothing, either magical, miraculous, or mysterious about pruning fruit trees, and this may be discovered by those who are willing to give time and labour in the pursuit of experienced knowledge.—J. W.

## MALMAISON CARNATIONS.

The photograph of a house of Malmaison Carnations which we reproduce came to us from Mr. G. H. Cook, gardener at Milburn, Esher, Surrey, who promises to detail his method of culture in a subsequent issue. In his first letter to us he writes, saying:

"I am sorry, but the photo gives one a very faint idea of the beauty of those blooms when this was taken. There were some 600 plants in the house, bearing on an average four blooms each, and measuring 4in to 5in across. These are the favourite flowers of my employer, the Hon. H. Bourkes, and consequently we make a speciality of them. So far we have had excellent results from our labour."

## Herbaceous and Hardy Borders.

### Stocktaking.

Don't read this if you have up-to-date hardy borders—the best of everything in them, and everything of the best. "Why not?" Well, given the above most desirable state of things in that most desirable section of latter day gardening the few hints proposed do not apply, for the happy man who has the best can have no better. Less blest ones may, possibly, dismiss the matter by saying they don't want to go humbugging around their borders just as things are going to rest, let 'em rest in peace. Precisely so. R.I.P. It is not the season for dunging and delving, and worrying up things that want to rest; but, mark you, it is the time for stocktaking. Be in time; hurry up with a fistful of labels ere things are indistinguishable, and you have to poke about for some precious bits, and "don't know where 'e are," perhaps never will know, only inasmuch as your destroying angel will account for it with "must a got chucked out with the rubbage, mister."

### The Migration of Plants.

It's strange how good things will disappear. Stranger still, that with all our scientific research there is yet much mystery about the migration of plants. Old Jack L—, who was very fond of "yarbashus plants," with all his simple ignorance knew a good deal more on that subject than the clever gardener who was his, as well as the writer's master, when a lad; so there was many a surreptitious chat over "Pattakees," "Genshers," and "Penstemmers"; seasoned by an old traveller's tales about rare things in "furrin' parts." Our friend of early days had, in his early days, been "all down the Merrygeranium Sea," consequently had due respect favouring a friendliness which culminated in "Come over a Sunday, lad, when m' darter's at home, and see my bit o' bloom." The dual attraction resulted in the two mile walk to old Jack's; tea with the "darter," and an inspection of the "yarbashus" beauties in the homely cottage garden. Strange, passing strange, but there were just such things in it as had disappeared from the Hall

gardens; a striking testimony to the migration of plants impressed by a sagacious wink from old Jack, which might have meant anything or nothing then; now it means a good deal. It was just such a wink and a nod that led at this year's bedding out to a dive into a disused upright boiler, the magnetic properties of which had attracted some of our best bedding plants into its capacious stomach on their journey from the frames to the front; so quietly, too, that the carriers "didn't know a 'a'p'orth about it."

#### Propagation.

Legitimate disappearance for want of a little forethought of many so-called hardy plants is apt to occur, and perennial propagation to keep up the stock is absolutely necessary. This is essentially the case with Pentstemons, and cuttings of these put in a frame under a north wall now, with such odds and ends as commend themselves for similar notice,

ladyship's gardener can trot over on Shank's mare for a few roots afterwards, muttering, perhaps, "M'lady's gone mad." However, he soon goes mad too, and there is a good deal of method, some right, some wrong, in their madness, which never assumes its most violent form, perhaps, until some "chiel" goes taking notes and "prents them"; then matters "gang awa'" fast and furious.

#### Borders, Beds, Rockeries, and Rooteries.

All sorts and conditions of planting, suitable and unsuitable to the positions and surroundings, are frequently in evidence; often sufficiently unsuitable to seriously detract from the show. The planter cannot consistently carry out all the natural freedom and grace characteristically inherent with the growth of hardy plants in violent opposition to harmonic lines without presenting incongruities; hence, in the formal garden, a certain amount of formality must rule.



Malmaison Carnations.

will make nice little plants, and be found real handy for filling frontage next spring. Root division at that season is, par excellence, the method for propagation of true herbaceous plants, and with due thought having been given to timely labelling, the weeding out of poor varieties, selection, division, and preservation of the best, all tends to result in the survival of the fittest. A friend who has worked on this principle for years has now the finest stock of superior kinds the most covetous could desire. Great beggar and generous giver as he is, the envied collection has not cost his employers one penny; all of which is, of course, very bad—for trade; yet self-made hardy borders are sometimes like self-made men, if not made that way they are not made at all. What an entrancing theme it is this hardy plant "mania"! Let but one man or wo—(I mean lady) be badly bitten in a locality hitherto exempt, the infection spreads as fast as her ladyship's landau can bring home the report of Mr. or Mrs. So-and-So's "lovely plants," or her

Justice to the plants must be tempered with mercy for the surroundings; and so much tempered, perhaps, that the subject is shorn of that beauty we look for in conjunction with it. In the kitchen garden, so often comprising the utile et dulce by important central or other borders, not only for ornamentation, but for a supply of cut bloom, the more prominent plants, such as perennial Sunflowers, Michaelmas Daisies, and others of that ilk, with a mixed planting of many things tender and tropical, annuals and biennials, are not only useful but essential to the end in view. In the flower garden proper, ornamental display is the object, and with possibly classic outlines which cannot be ignored, formality is still more in evidence, and it is only when one can escape from trim edges and prim geometrical designs that the lover of hardy plants feels free to have his fling. What a glorious thing is freedom! And what a happy exposition it is possible to give with bold, irregular, marginal outlines, composed, for preference, of



rough, rocky boulders forming bays, promontories, plateaus, mounds, shady nooks, and sunny crannies, each suggestive of suitability for particular occupants, either as protection for the weak or imprisonment for the aggressively strong. On an extensive scale, giving a variety of aspects, heavy tree roots and rough logs can be impressed into service; in shady angles or moisture-holding spots these make a break, and are admirably adapted for Ferns, amongst which *Osmundas*, the *Struthiopteris*, and *Adiantum pedatum* may well find a place.

#### More Propagation.

There is one excellent adjunct to hardy plant culture which has been inadvertently passed over, viz., a Burbidgean nursery for seedlings. It is for just such things as may, or may not, grow; and may, or may not, be useful. The groundwork of the method is a bed in some quiet corner, raised for preference, and edged with substantial stones. The filling in is done at all times, and pretty with all things in the form of ripe seed pods gathered here, there, and everywhere among the hardy plants whilst walking round. Some particular things, such as *Meconopsis Wallichii*, claim of necessity their rights to a seed pan or box under glass. In a Burbidgean bed there is no labelling, no fuss, and from this stock collection many a good thing can be extracted when identified, and transferred to its proper position in the garden, or in somebody else's garden where beggars abound. "Finished?" No. There is no finish to this subject, and for those who, having all and knowing all, heeded not the preliminary advice no apology from—QUIZ.

### STRAWBERRIES IN POTS.

The commencement of swelling in the crowns usually marks the advent of aphides in the developing leaves and trusses. A close scrutiny must be made for these pests on the earliest started batch of plants, which are now starting from the crowns, fumigating repeatedly until the pests are exterminated. The temperature may be advanced a few degrees by day, but it is advisable to seek this from sun rather than procure it from fire heat. A temperature of 50deg at night is quite sufficient for the present, and 60deg to 65deg with sun, and a free circulation of air. This will insure steady and sturdy development, and the more slowly the plants are brought on the stronger the blossom and better the setting. This means relying greatly on sun heat, which is very uncertain during the winter months; therefore the plants have to be brought on independent of the weather, and as near the glass as safe, in order to secure a stout growth. Syringing the plants in the early part of fine days will be advantageous, also on fine afternoons, but avoid a close saturated atmosphere. Examine the plants daily, and apply water to all those which require it. A plant with the soil too dry cannot grow, but is wasted through exhausting the stored juices, and one with the soil too wet is stagnated, the soil being poor and the plant unhealthy.

Other plants should be started for affording ripe fruit in late March or early in April. There are now so many varieties that it is difficult to make choice of a few, so as to include the best. *La Grosse Sucrée*, true stock of Keen's Seedling, and *Vicomtesse Hericart de Thury* are not a great way behind the earliest in ripening, and are dependable, as also is *Royal Sovereign*. Noble and *Auguste Nicaise*, with *James Veitch*, will satisfy most people in need of a big crop and large fruit. Remove the decayed leaves, attend to the drainage, and, if necessary, rectify it, washing the pots clean. Loosen the surface soil and top-dress with rotten manure, rubbed through a half-inch sieve, adding about a pint of a mixture of three parts superphosphate, two parts powdered saltpetre, and one part gypsum to each bushel of rotten manure or rich compost. This acts well on the roots, causing them to push fresh fibrelets freely. The plants may be introduced to a Peach house now being started, or to a Strawberry house if one be available.

Plants for drafting to houses as started should be placed in frames, or in a house from which frost is excluded, so that they will be fit for work when required; but they must not be kept dry, and the pots must be plunged if there is danger of frost, as it is absolutely necessary that they be kept from damage of that kind. Plants for introducing later on will be quite safe in their quarters out of doors plunged in ashes to the rim of the pots, and a light covering of dry fern or litter may be given in severe weather, allowing to remain on whilst frost-bound, removing in mild weather, but not exposing frozen plants from beneath protection to the direct rays of the sun.

—G. A.



### The Time of Striking Cuttings.

The appetites of Chrysanthemists have now been appeased in the great floral feasts now just over, and consequently thoughts are turned towards the next, that of November, 1903. There always have been mixed feelings among growers as to the better time for striking cuttings to get the best results from their culture for specimen blooms, and it occurred to the writer that probably a "show of hands" in favour and against the practice of early striking may be useful to many readers. One may hear every season fresh resolutions made by almost every grower affecting some technical point of culture, and this season is not less fertile in such matters. Some resolve to proceed at once at the close of the shows to make a start with cuttings; others will defer propagation until January and February.

An example was related to me to-day (December 11) by a very good grower that his best blooms this year were from cuttings struck in February last. This fact would strengthen conviction that November's haste did not apply stamina to carry speed to a successful race. This opinion, however, from another grower would be met with rebutting evidence, and thus two extremes must continue, not only now, as in the past, but for all time. Some kinds probably succeed on a short lease, others fail; but the object of this note is not to argue for or against the practice, but to seek the opinion of others who are better qualified, and who have the interest of the flower fresh on the mind. Question: In which month is it best to propagate, to obtain specimen blooms?—W. S.

#### The Height of Some Novelties.

In a somewhat malignant manner Mr. Wells comments on page 537 on a bloom of Mrs. T. W. Pockett which I placed in one of my exhibits. Mr. G. Foster asked for information respecting one of the novelties recommended in a previous issue of the Journal, and what a comparison between blooms of a different variety, which I and another exhibitor had, has to do with the question I cannot comprehend, unless it be that Mr. Wells is anxious to belittle my efforts as a grower. I admit that the bloom of Mrs. T. W. Pockett was nothing to be proud of, but it was the best I had from many plants. If comparisons are permitted, I would say that even Mr. Pulling's blooms of this variety cut a poor figure by the side of my blooms of *Bessie Godfrey*. *Mafeking Hero* can hardly be termed a novelty, for I sent it out two years ago. Lord Alverstone in October I had on fine plants of less than 2ft in height. On later buds it was less satisfactory. Three fine flowers I placed before the Floral Committee of the R.H.S., but as they were past I suppose I over-rated the variety. Still, I consider very inferior blooms of some varieties have received the Award of Merit. The blooms of *Durban's Pride*, as noted by "Viator," were from plants which I imported the previous season from America. It is without question the same variety which Mr. Wells procured plants of from Australia.—W. J. GODFREY.

#### Date of Chrysanthemum Shows, 1903.

The societies that make an early announcement of the date of their shows are to be commended for various reasons. In the first place, other societies have then an opportunity to arrange their fixtures to avoid clashing with others in the same locality. Unfortunately, though, some do not pay heed to such forethought, but allow their society to run counter to another, with results not at all times in the interests of both, either financially or as an exhibition. In the second place, exhibitors have so much better an opportunity to prepare their plants when the date of the exhibition is announced ten or even twelve months in advance. The early issue of prize schedules, too, is a step in the right direction. I have known important societies issue their schedules four months before the date of show, and then complain if exhibitors did not support them in force. With a view of assisting the executive of societies who may see this note, I give the dates of shows already arranged for 1903 as far as I am able. Plymouth, November 3; Cardiff and Cambridge, November 4; N.C.S. and Birmingham, November 10; Winchester, November 11; West Hartlepool, November 17; York and Hull, November 18; Edinburgh, November 19; Bolton, November 20. The date given represents the opening day of each show.—E. M.

## Muscat Grapes.

As civilisation advances, the needs of individuals become more numerous, and their tastes more critical. What was looked upon as a luxury yesterday soon becomes an apparent necessity. In regard to the products of the garden a marked feature of recent years—in private gardens—has been the demand for fruit, vegetables, or flowers of high quality. By an inexorable law of nature the choicest and most delicately flavoured fruits are more difficult to cultivate than others which may be in some respects more showy, and although those which appeal to the eye by reason of their beauty quickly become popular, they do not retain their popularity like those which have the "hall mark" of fine flavour.

Turning to Grapes in particular, how splendidly those fine varieties, such as Muscat of Alexandria, Mrs. Pince, and Madresfield Court maintain their high positions among Grape connoisseurs. The former was perhaps never more popular than to-day, and the majority of gardeners in private places know pretty well that there is an increasing desire on the part of employers to be supplied with Muscats during as long a season as possible. This, of course, adds to the difficulties of gardeners, as it is not everywhere that the conveniences at command are suitable for growing this fine Grape largely, and even when cultivators have every advantage in this respect, very skilful attention is necessary to secure good crops regularly, for unless the Vines are kept up to what I will term the "high water mark" in regard to health, their cropping capabilities quickly deteriorate. At the present time that serious item, viz., the fuel bill, has to be considered in the above connection, because if Muscats are largely grown in preference to other varieties, considerably more heat will be required. Employers ought therefore to remember that if this best of all Grapes is to displace others in their houses, the expenses will be increased, and the high quality of the produce should therefore be considered as an asset of the garden.

Those who contemplate increasing their supply of Muscats will do well to consider the advisability of grafting or inarching that variety on their established Vines, rather than uproot them and replant, as Muscats succeed splendidly when grafted on other varieties; and although I have had many Vines so grafted to deal with, I could never detect any difference in the flavour of the produce than when the Vines were on their own roots. On the other hand, I am inclined to think there is an advantage in having a Muscat on a more vigorous rooting stock, as the principal reason why this fine Grape so often gets into an unsatisfactory condition is that the roots become inactive through mistakes in watering, or from other causes which are sometimes unavoidable. The rooting system of a Muscat seems to get out of order more quickly than that of other kinds.

There is no doubt in my mind that a far better rod is obtained in one season by grafting than by inarching, as I have tried both on Vines growing side by side; but when grafting is practised the old rod is, of course, sacrificed, and therefore no Grapes are obtained the first season. When, therefore, it is not convenient to sacrifice a year's crop, the following plan is an excellent one to pursue. Cut every alternate Vine down to within a foot or 18 in of the ground in January, and as soon as the sap is moving freely graft them. It is surprising what grand canes can be produced in one season from dormant grafts inserted in early spring. The remaining Vines should be inarched when the leaves are freely expanding. For this purpose it is necessary to have Muscat Vines in pots to inarch on the old rods. All that is necessary is to tongue the stock and the scion, fit them together carefully, bind firmly, and cover with moss, which should be moistened daily. In a couple of months the union should be complete, then the pot Vine can be cut away.

If a young shoot has been retained on this below the point of union, it will form a moderate sized cane during the season, and the Vine will be useful for planting the following season. The old inarched Vine will, of course, be able to carry a fair crop during the season, and the young Vine worked upon it should produce a good cane, which can be trained in a position where it gets plenty of light. In the autumn the old Vines should be cut away and the inarched

canes shortened severely or moderately, according to their strength. The following season the grafted Vines may be allowed to carry a moderate crop, and the second year the whole of the rods should be cropped according to their size and strength.

Before work of the above description is begun a little extra attention ought to be given to the border in the way of removing the surface soil down to a point where active roots are found, and adding fresh compost, in order to secure as far as possible vigorous growth. The advantage of employing grafting and inarching in changing the variety of Grape grown is that it is less expensive and quicker than by remaking the border and replanting, but it is only wise to adopt it when the Vines are already established, are healthy, and not very old. The above method, however, provides an excellent way of getting over a difficulty when a gardener who has Vines of other varieties in excellent condition, is requested to largely increase his supply of Muscats because they are preferred to all other Grapes. Other remarks on the culture of this "king" of Grapes I hope to advance for another issue.—ONWARD.

## The Bees' Hum.

A man who leads a busy life in our large towns, and lives in the suburbs, could not do better than commence bee-keeping as a paying hobby, and one which will provide a healthful occupation. Many years ago I met a gentleman who was storm-bound, like myself, and got into conversation with him. We conversed on many topics, and at last admired the beauty of a field of Clover, and he remarked how thousands of pounds were lost to this country annually because people would not take the trouble to keep and understand bees. This is perfectly true. When I lived in London a friend of mine came to see me, and one evening he told me many things about these wonderful insects, and concluded by saying he had cleared £6 from six bar-framed hives that year. From that day I made up my mind to keep bees so soon as an opportunity presented itself.

### What is Needed.

(1) Purchase a piece of black net 1½ yds long and ¾ yd deep, sew the ends together, and put a piece of elastic round the top, so that you can slip the veil tightly over a broad-brimmed hat. This will give you confidence when handling the bees. By way of warning, let me add, always wear the veil when performing any simple manipulation of the bees. (2) A good smoker is indispensable. (3) Buy a hive of any good maker, and then, as you gain experience and skill in the art of bee-keeping, make your own on the same pattern as the one you have purchased.

How to START.—The question often asked is, When ought we to commence bee-keeping? This is an easy question to put, but rather difficult to answer, as much depends upon circumstances, and the state of one's finances. Bees may in autumn be obtained for the driving, because, most unfortunately, the cottagers destroy the bees over the cruel sulphur fumes [?] in order to take the honey.

### How to Drive.

When the bees have been flying freely during the day, and if the evening be fine, then they may be driven with little fear of stings. Give the bees to be driven a puff of smoke, and rap the sides of the hive a little to frighten them and cause them to rush to the honey to gorge themselves. Wait a few seconds and then give them another puff. Overturn the skep and give a third puff to drive them down. place the overturned hive in a bucket, and if you have not seen the operation performed, put another skep of the same size over it, so that the rims coincide. Tap the sides of the hive with your hands or light stick, and in about fifteen or twenty minutes the bees will be in the top skep. It is best to drive two or more stocks, and mix the lots together. Take them to their new home, overturn them on the frames, which have previously been fitted with brood foundation—eight sheets to the pound—and cover snugly with quilts.—HYBLA.



## NOTES & NOTICES

### Illness of Mr. Cecil Cant.

Many of those rosarians who have come into touch with Mr. Cecil Cant, of Colchester, will join their sympathy with ours in learning of his critical condition through appendicitis. We most sincerely trust that soon he may again be completely restored, to assume the responsibilities of business along with his elder brother.

### A Meteorological Inquiry.

The First Lord of the Treasury has appointed a committee to inquire and report as to the administration by the meteorological council of the existing Parliamentary grant, and as to whether any changes in its apportionment are desirable in the interests of meteorological science, and to make any further recommendations that may occur to them with a view to increasing the utility of the grant.

### Notes from Hamilton, N B.

The frost which visited the district some ten days ago, and which appeared as if it came to stay for some time, has as suddenly and as unexpectedly left us to enjoy as best as we can the cheerless wet weather previously experienced. As I write, the rain comes down incessantly, and has done so since the same time yesterday morning, with only a brief interval during the night. Yesterday (Sunday) the sudden change which broke up the frost on Saturday morning culminated in a storm of wind and rain which approached the magnitude of a gale. But to-day the gale has subsided, and the atmosphere is colder, and I should not be surprised to see some snow supervene. The last few weeks have been remarkable for sudden falls and rises in temperature, and as the freaks of weather are often recurrent it is very possible that we shall have some more variable samples up till the end of the year at least. I note in last week's Journal that, on account of the mildness of the season, Strawberries and Raspberries were gathered in gardens in the sunny South. I, too, gathered about half a pint of the finest Raspberries we had this year on November 26 last. Flavour was almost as good, though a little more watery, as if pulled in the height of the season. In noting such curiosities it would be well to remark that the fruit was fertilised early in autumn, and on account of the general lateness of the season it necessarily took longer time to mature.—D. C.

### The Burmese Honeysuckle.

*Lonicera hildebrandiana* is the finest Woodbine that one could plant in a large conservatory. It must be a large structure to properly display it, and shelter is a necessity for this giant in Scotland, or at least in Edinburgh. But in southern England it seems to lead a happy life in the open. In the Edinburgh Botanic Gardens it is a very vigorous climber, which flowers from July to September. And profuse though the flowering shoots be, the fragrance is yet more noticeable, for it is sweetly diffused through a large and lofty conservatory. The large flowers are almost half a foot in length, and they are said to be capable of yet longer attempts. Freshly expanded, they are of a creamy yellow; but this colour soon deepens, and, passing through various and pleasing shades, arrives at a deep orange red, which colour marks their approaching flight to earth. This grand Honeysuckle is yet a new denizen of our gardens, as it is but four years since it was first flowered in this country at the Glasnevin Botanic Gardens in Ireland. In its native habitat it is a somewhat rare plant, and used like other choice things for the decoration of native temples. Its hardiness is owing to the altitude (about 5,000ft) at which it is found on the Shan Hills, and probably when plants of this Honeysuckle are more plentiful, it will be found to be suitable as an outdoor plant in more parts of the country. It was first raised from imported seeds, but cuttings of firm shoots 6in or so in length root freely in a warm propagating case.—D. S. FISH.

### Rev. H. Honywood D'Ombra.

It was most pleasant information that Mr. E. Mawley gave to his supporters at the annual dinner of the National Rose Society on Thursday last, when he reported Mr. D'Ombra's greatly improved state of health. Some of us had thought that the cold weather might have an undesirable effect on the condition of the veteran's health, but this, happily, is not so.

### Chinese Tree Planting.

The Chinese do many foolish things, but also some wise ones. Large proclamations have recently been posted throughout Yunnan exhorting the people to plant trees broadcast. The trees of Yunnan suffered terribly in the Mohammedan rebellion thirty years ago, and no earnest effort has yet been made to repair the loss. Official rank is promised to all who plant 10,000 trees or over, so that possibly the Chinese love of a button may lead in a few years' time to the changing of some of these barren hills into well-wooded and useful tracts of country. There are complaints that afforestation in this country does not always receive the attention it deserves. Could we not take a leaf out of China's book and give some reward to the man who makes two trees grow where only one grew before?

### The First Seed Catalogue for 1903.

Scarcely have the bulb catalogues ceased arriving before those devoted to trees, fruit, shrubs, and Roses begin to appear, and all of these are not recorded when Mercury's vanguard heralds the dawn of the new seed season. With the turn of the year the gardener considers his forthcoming seed-list, and soon the earlier sowings are made. Messrs. J. Veitch and Sons, Limited, are first in the field this year with an excellently arranged catalogue, which contains one of the best coloured plates (of *Streptocarpus*) we have seen in a publication of this kind. Following hard upon the aforementioned catalogue, comes another well-known guide, Messrs. Sutton and Sons' Amateur's Guide in Horticulture for 1903. It is one of those catalogues the professional gardener or amateur most prizes: it is up to its usual high standard.

### A United Agriculture, Horticulture, and Sylviculture.

The three arts, agriculture, horticulture, and sylviculture, are so intimately associated with one another that it is a matter of difficulty to determine where one begins, or another ceases to form a part of the chain which connects the whole three. Essentially there is no line of division, and therefore it behoves that every effort should be made to smooth any appearance of such that may exist, to alienate the natural fusion (if the term is admissible) when that should present itself. We are, perhaps, too much inclined to assign different parts to each, without in the remotest degree giving the least consideration to the relation they have to one another. In this manner we are, instead of coming in closer touch as years roll by, losing sight of our natural kinship, and our original common descent. This is by no means a desirable position for any one of the arts enumerated, for each is so peculiarly constituted that it necessarily requires all the combined force that unity of purpose can bring to bear upon it. How much more powerful would the authority and claims of each individually be, were each a component part of a grand united whole? Though almost insurmountable difficulties appear to lie in the way of such a united fellowship becoming a practicable force in the industrial economics of the country, yet there is no reason for thinking its accomplishment impossible. Perhaps it is through the instrumentality of the combined action of these three arts that our waste lands and denuded forests are to be planted and replanted for exigencies of the future. At least it would appear that private enterprise must sooner or later step in to save the situation, and doubtless this is very much as it ought to be. The continual croaking that the Government ought to take up the matter is not very indicative of wisdom, nor would such an action on the part of Government be a resourceful one for the nation. All private enterprises, we know, are a source of wealth to the nation; Government concerns are not invariably so, and in this instance could hardly be expected to be. Therefore, nobody is more fitted for the great work which must be effected in the future than the body which I beg to designate, "The Royal United Arts of Agriculture, Horticulture, and Sylviculture, of Great Britain and Ireland, &c."—ALBION.

**Chester Paxton Society.**

It has been decided to hold the next exhibition of fruits and Chrysanthemums in connection with this society on Wednesday and Thursday, November 11 and 12, 1903.—G. P. MILN.

**Weather in the North.**

The severe frost of the previous week declined in severity, and gave way on the 10th. Since then the weather has been dull and cold. On Sunday a gale from the south raged all day, with heavy rain. Monday was also dull, but fresh and fair.—B. D., S. Perthshire.

**Carter's "Vade Mecum."**

This apathetical land of ours, much to the annoyance, we should think, of its ever-present detractors, sometimes takes the lead in business as in art. Messrs. James Carter and Co.'s new seed catalogue is a case in point, for we have yet to see the foreign nursery catalogue that contains twenty-four coloured photographs, as this does. The size has been altered to more convenient proportions, which marks another change in the right direction. The catalogue is a work of art, as well as one of great value.

**Johannesburg, Transvaal.**

Over and around Johannesburg severe hailstorms fell early in November, damaging to an enormous extent the fruit and vegetable crops, as well as annuals just recently planted out. The hailstones were about the size of a pigeon's egg, but in some districts they were not so large, and in these cases the damage was not so great. One nurseryman and florist estimates his loss at over £2,000. After the storm not a Strawberry could be picked without a deep gash in it, and in the worst parts very few Peaches and Apricots will be pulled but what are damaged. The Vines also received a hard knocking, and the ground around them was quite green with leaves and bunches of Grapes. The fruit crop is a fairly heavy one, and was just on the point of ripening when the storms, which lasted no more than fifteen minutes each, burst over them, and in the shops and market little fruit is seen in an undamaged condition. Tomatoes and Melons were almost ruined, and Cabbages and Cauliflowers looked as if so many Mauser bullets had been showered upon them. Fruit in large quantities is now coming up from the Cape and Natal.

**Sugar Beet and Sugar Cane.**

Sugar Beet is grown in various quarters of the globe, and in vast quantities. The discovery of the presence of sugar in Beet-root, and the first experiments for its production, were made in Germany during the latter half of the eighteenth century. In 1747 Marggraf read a paper before the Berlin Academy of Sciences, and showed that he had obtained, by means of alcohol, 6.2 per cent. sugar from white Beet and 4.5 per cent. from red Beet. After the peace of Aix-la-Chapelle, however, the Continent was flooded with cheap British Colonial sugar, and the attempts to manufacture Beet sugar were abandoned until towards the end of the century. Achard and Hermbstadt resumed the experiments, and, assisted by the then prevailing Continental blockade, succeeded in laying the foundation of the German Beet sugar industry. The circumstances were certainly favourable, as the price of Cane sugar rose, for example, from 1s. per lb in 1805 to 5s. 6d. per lb in 1811, and Napoleon I. gave the infant industry his special assistance and protection. After his deposition, however, a great reaction took place, as the great majority of newly-founded sugar works were compelled to close owing to their unsuitable situation, the cessation of State aid, and the fall in the price of sugar after the close of the Continental blockade. About ten years afterwards the forward movement began again, and, aided principally by chemical and agricultural science, raised Germany to the position she occupies to-day as the greatest sugar-producing country of the world. There is no doubt that the bounty system has also most materially assisted the growth of the sugar industry, but science has had a very great deal to do in the matter, and the question is whether science applied with equal thoroughness might not do as much for the original source of sugar, the Sugar-Cane.—("Grocer.")

**National Sweet Pea Society.**

The annual general meeting will be held at the Hotel Windsor on Monday, 29th inst., at 4 p.m. Agenda: To receive the report and balance-sheet, election of officers and committee, the show in 1903, any other business.—HORACE J. WRIGHT.

**Appointments.**

Mr. William Keay, for the past seven years gardener at Westertel, St. Andrews, Fifeshire, as gardener to Walter Cunliffe, Esq., Headley Court, Epsom, Surrey. \* \* Mr. F. H. Shinner, late foreman at Osberton House, Worksop, Notts, as head gardener to Lord Arthur Butler, Gennings Park, Maidstone, Kent.

**National Amateur Gardeners, Liverpool Branch.**

From the excellent attendance of members and friends of the above branch at the annual social evening held in the Common Hall, Hackins Hey, on Wednesday last, it would appear that this useful branch is now on a more firm footing than on any previous occasion in its history. In the unavoidable absence of the president, Mr. A. W. Ardran was voted to the chair. There was a high-class musical programme submitted; Mrs. Robins being responsible for it. The artistes were Mesdames Reynolds, L. Smith, C. Smith, Gray, Laurenson, Thorn, Ash, and Dodd, and Messrs. E. Smith, Porter, Guilbert, and R. Pinnington. Light refreshments were provided during the evening under the supervision of Mesdames Paddock and Stevenson, assisted by a willing band of helpers. Votes of thanks were passed to the chairman, and to Messrs. Frisby, Dyke and Co. for the decoration of the room.—R. P. R.

**Humber Brand Insecticide.**

A few weeks ago we received a sample cask of this insecticide, and for trial placed it in the hands of a highly successful practical gardener, who kindly reports as under:—"Though of modern introduction, this has already created a good impression on those who have proved its efficacy. It would appear to be a highly concentrated solution of insect-destroying chemicals, pleasant, rather than offensive, to the user, and certainly rigorous in its action on the lighter side of insect life. Green and black fly, thrips, and even mealy bug fare badly when subject to an immersion of this Humber Brand in suitable strength. No apparent injury resulted to tender leafage, and it is our opinion that it is a preparation destined to do much in the future dealing with greenhouse troubles in the insect world. It certainly claims originality in name and substance, and its first trials are more convincing than many that have come before us."

**The Calderstone Estate.**

I have in these pages from time to time referred to the good work that is being carried on by the Liverpool Parks and Gardens' Committee, the last of which was the purchase of the fine Calderstone estate, and which is still in charge of the veteran, Mr. W. Tunnington. No satisfactory solution of what the Council intended to do with the estate has yet been arrived at, but now a rumour has gone forth that the Estate Committee of the Corporation will draw up a scheme in which they purpose transferring the Wavertree Botanical Gardens to Calderstone, with a view to making it also into a grand public park, the residents being thoroughly in accord, providing houses of a certain rateable value are erected. If this idea is carried out there can be no question as to the suitability of such a position, for almost every kind of outdoor plant flourishes most luxuriantly, so pure is the air and rich the soil. Of the present Wavertree Gardens, and the care and attention bestowed upon them since Mr. J. Guttridge took charge, an admiring public—which at any time can be seen wending their way through—are the best judges; and if botanical research cannot be carried out to perfection, there are many other subjects which are equally interesting to the large residential population in the immediate neighbourhood. So rapid are the building operations in every direction, that now or never is the time for a bold policy. By acquiring land every class of the public will be benefited in years to come, and the work of the committee, which is arduous, and sometimes severely criticised, will redound to their credit. The scheme is sure to be followed with much interest.—R. P. R.



## Societies.

### R.H.S. Scientific Committee, December 9th.

Present: Dr. M. T. Masters, in the chair; Messrs. Douglas, Gordon, Hudson, Veitch, Saunders, Bowles, and Worsdell, Dr. Cooke, Revs. W. Wilks and G. Henslow (Hon. Sec.).

*Dr. M. C. Cooke, V.M.H.*—Dr. Masters rose and said he had much pleasure, in which he was quite sure the Committee would join, in handing the gold medal to Dr. Cooke, to whom the Council of the Society had assigned it. Dr. Cooke expressed his thanks for the same.

*Carnation leaves rocting.*—Mr. Douglas observed, with regard to a remark of Mr. Massee's, that roots sometimes occur on the leaves when the roots were affected. That in the case of these he had exhibited the roots were perfectly sound, and he could suggest no cause for the appearance of the roots on the leaves.

*Nephrolepis tuberosa.*—Mr. Saunders exhibited some of the tubers found on the roots of this plant. They did not appear to have "eyes" or buds upon them, so as to be propagative. It was suggested that their use may be for water storage only.

*Celeriac disease.*—Specimens were sent by Mr. Kitson, The Chantry, Netherbury. Dr. Cooke undertook to examine and report upon them.

*Hyacinth bulbs diseased.*—Mr. Saunders gave the following report upon the bulbs sent to the last meeting:—

"A Hyacinth bulb, which was very much decayed, was shown at the last meeting of the R.H.S. Scientific Committee. The bulb contained any number of the bulb mite, *Rhizoglyphus echinopus*, and these mites were no doubt the cause of the injury to the bulb. Besides the mites there was a quantity of a greenish mould, which I imagine only began to grow on the bulb after it had been killed by the mites. When bulbs are infested with these mites in the manner that this one was, nothing can be done, as far as I know, to save them. When only a few mites are at the base of the bulb—where the attack generally commences—they may be killed by immersing the bulbs for five minutes in water at a temperature of 115 or 120deg. Fahr. If some sulphide of potassium (6oz. to a pint) was added to the water, this remedy would be all the more efficacious; indeed it is said that soaking the bulbs in this solution cold for twenty minutes will kill the mites. It is very essential that any of the soil from pots which has contained bulbs infested by this pest should not be allowed to get mixed with fresh soil on the potting bench or elsewhere." Dr. M. C. Cooke added the following observations:—"Such a profuse crop of saprophytic moulds, as *Penicillium*, that they effectually mask the disease, whatever it may be, and there are plentiful *Acari* present." [For figure, with life-history and preventives of the bulb mite, see the *Journal of Horticulture* for September 18, 1902.]

*Dictamnus Fraxinella.*—Mr. Bowles referred to the germination of the seeds of this plant, as they were sown as soon as ripe, but did not germinate. Mr. Wilks observed that the seeds will not germinate if kept any time out of the ground, so that it was thought they may have been overwatered. Mr. Wilks added that the best procedure is to sow them at once in a pan with a tile over it touching the earth, till required to be planted out.

*Physiological experiment.*—Mr. Henslow described an experiment he had carried out with two objects in view. The first was to ascertain if darkness had any effect upon the direction of growth of roots. He grew some Mustard on a perforated tin over a glass of water, the latter having black paper pasted all over it, excepting a narrow strip facing the light, which could fall upon the roots in the water. They, however, grew vertically downwards uninfluenced under these conditions by either light or darkness. The second object was to see if water arrested the growth of the primary root, as in a paper on "A Theoretical Origin of Monocotyledons from Aquatic Dicotyledons" (Journ. Linn. Soc., vol. xxix., page 486), he had inferred from the great number of coincidences, both in morphology and anatomy, that such must have been the case. One such agreement was the total arrest of the axial root in all Monocotyledons and also in aquatic Dicotyledons, as *Ranunculus aquatilis*, *Tripa*, *Ceratophyllum*, *Victoria regia*, &c. Such proved to be the case with Mustard. The conical extremity of the tap-root became brown and died, while strong secondary roots with root-hairs arose from the pericycle of the point just above the dead apex. This experimental verification thus corroborated the above induction.

### Fruit and Vegetable Committee.

A meeting of the members of the Fruit and Vegetable Committee was held at Chiswick on the 5th inst. to test the cooked merits of several late or main crop new varieties of Potatoes that were, at the September meeting, when lifted, found to be great croppers, but when cooked proved to be immature. In spite of the inclement weather, eleven members attended—Mr. H. Balderson (chairman), Messrs. O. Thomas, J. Willard, H. J.

Wright, S. Mortimer, W. Bates, G. Kelf, G. Wythes, G. Reynolds, G. T. Miles, and A. Dean. Ten varieties of Potatoes were cooked, all being admirably presented quite hot. Of these only one, *Victoria Improved* (Sharpe), a fine white round, obtained an Award of Merit, the voting being unanimous. For *Alderman* (Sharpe), voting for and against an award were five each way, the tubers proving to be of unequal quality when tasted. *Sprayfield* (Dobbie), votes six against and four for, was similarly defective. The season is to be credited with this difference, some tubers being younger than others. It was resolved that these two, with *Dalmeny Beauty* (Smith), a very heavy cropper, *Favourite* (Dobbie), *Marfield* (Bristowe), and *Lord Roberts* (also a heavy cropper) be grown again next year under, it is hoped, more favourable conditions. The committee desired that a commendation of the way the tubers were cooked and put on the table be entered on the minutes. It was stated on inquiry (reports "The Garden") that the trials conducted for the committee next year would include Potatoes, Peas, and Tomatoes, as usual, and specially comprehensive ones of Vegetable Marrows and dwarf and climbing Kidney Beans, a full representation of all good old and new varieties being desired and invited.

### Reading Gardeners' Association.

At the last fortnightly meeting of the above association Mr. W. Tribbick, of Brook Gardens, Isle of Wight, read a most interesting and practical paper on "The Cultivation of Peaches and Nectarines." The opening portion treated with the origin, history, and most prominent characteristics of the fruits; and this was followed by cultural details under the following headings:—Position, soil, time of planting, disbudding, watering, ventilation, bud dropping, winter work in houses, manures, diseases, and varieties. A good discussion followed, in which Messrs. Hinton, Neve, Woolford, Blake, Powell, Clinch, Stanton, Alexander, Fry, and Bright took part. The exhibits were not numerous, but one was of exceptional interest—viz., a punnet of Red Currants shown by Mr. F. Bright, of Whiteknights Park, picked on the same day from the open. The fruits were in splendid condition, of good size, and equal to those usually gathered in July. Mr. Hinton, of Walmer Gardens, exhibited several vases of single Chrysanthemums.

### Chester Paxton Society.

The annual general meeting of this society was held in the Grosvenor Museum on Saturday, under the presidency of Mr. John Weaver, Christleton. Mr. G. P. Miln, the hon. sec., submitted his annual report, which showed that the society had enjoyed a greater measure of prosperity during the past year than in any other year since it was instituted in 1889. The number of members and subscribers on the society's books now reaches close upon 500, with a credit balance in hand of over £50. Captain MacGillycuddy, Bache Hall, who takes a keen interest in the society, was unanimously elected president for the year, with Mr. N. F. Barnes, Eaton, as chairman of committee, and the following executive:—Messrs. A. Armstrong, J. Clack, Jno. Dutton, A. Ellams, A. E. Goodman, T. Gilbert, J. Jackson, H. G. Little, G. Lyon, S. May, W. Pringle, Jos. Ryder, E. Stubbs, J. D. Siddall, Robert Wakefield, and Jno. Weaver, with R. Newstead as consulting naturalist and G. P. Miln hon. sec. It was decided to hold the next exhibition of fruits and Chrysanthemums in the Town Hall on Wednesday and Thursday, November 11 and 12, 1903.

### Wargrave Gardeners' Association.

On Wednesday, November 19, the members of the above society held a show of Chrysanthemums, fruit, and vegetables in the Woodcliffe Hall, in aid of the Gardeners' Royal Benevolent Institution. Considering that there was only a fortnight's grace given from the time of the proposal to hold a show, it must be a great success for the small number of gardeners in a district like Wargrave to have put up such an exhibit of Chrysanthemums, &c., as was there, and to collect a sum of £11 19s. 6d., which has been sent to the secretary of the above deserving institution. All the more credit is due to the members for the interest they took in it, and there were no prizes whatever given. Those who could bring plants brought them with the sole idea of providing pleasure for the visitors and to assist the cause. I am certain the wish of all was that it might be an annual exhibition. Among the exhibits were four well-arranged groups of Chrysanthemums and foliage plants that would have done justice to any show. From Park Place came an exhibit of forty-eight dishes of Apples and twenty dishes of Pears, all named, with a basket of Oranges, Citrons, and Diospyros Kaki, together with beautifully worked lyre done with *Bougainvillea* flowers and *Cypripedium insigne*; also a basket of autumn foliage and berries, two wire stands of *Heliotrope* and *Tropæolum*. The basket of

new Potatoes, showing the system of growing new Potatoes all the year round, created much interest. Among the cut flowers and vegetables were some fine examples of culture, but space will not allow me to make mention of them. I trust that the editor will find space for this short report, and that other associations might follow suit for this good cause.—I am, &c., J. BOTLEY, December 10, 1902.

### Bristol Gardeners' Association.

The fortnightly meeting of the society was held at St. John's Parish Room, Redland, on Thursday last, Mr. E. Binfield being in the chair. The subject for the evening was "Stove Plants," introduced by Mr. J. T. Curtis, Stoke Bishop. He dealt in his lecture with the flowering section, and proved in his effort that he was equally master of his subject and the possessor of a pleasing platform ability. Dealing in detail with the Allamanda, Bougainvillea, Clerodendron, Ixora, Gardenia, Anthurium, and others, he gave as the result of much experience full instructions for successful culture of all, treating very fully the soils suitable, potting, watering, and insect pests, with suggestions for their eradication. A good discussion followed the lecture, and Mr. Curtis was accorded the hearty thanks of the meeting. Prizes for two foliage plants were awarded to Mr. J. B. Brain (gardener, Mr. Atwell) and Mr. J. Colthurst Godwin (gardener, Mr. McCulloch). Certificates of merit went to Mr. Poole, F.R.H.S. (gardener to Lady Cave), for collection of stove and greenhouse flowers, and Mr. White (gardener to Mr. Gilbert Howes) for *Dendrobium nobile*. It is interesting to know that the library has been successfully started, the duties of librarian being undertaken by Mr. J. T. Curtis.

### National Carnation and Picotee, Southern Section.

The annual meeting of this Society took place at the Horticultural Club on the 13th inst., Mr. E. Colby Sharpin, the chairman of the committee, presiding over a good attendance, which included Messrs. F. A. Wellesley, H. Turner, A. W. Jones (Birmingham), E. Charrington, C. Blick, A. J. Rowberry, C. Phillips (Bracknell), J. Sargent, W. L. Walker (Reading), &c. Mr. Martin R. Smith, the president of the society, was unable to attend, being abroad for the benefit of his health. The annual report stated that the position of the Society is of a thoroughly sound and satisfactory character; and though forty-five members had been lost to the society by death and other causes, forty-seven new members had been obtained, being two to the good. In view of the balance in hand having been reduced in 1901, the prize money offered in 1902 was reduced in a few particulars, with the result that the income had exceeded the expenditure by £6, although a considerably larger sum had been paid for printing, owing to the demand made for copies of the annual report for 1901, which included a paper by Mr. M. R. Smith on manuring Carnations, and this had necessitated a reprint of the paper. The balance-sheet shows that, including the sum of £119 10s. 6d. brought over from last year, the total income for the year was £358 11s.; subscriptions amounted to £229 6s. 6d.; the expenditure included £128 11s. paid in prizes, printing, &c., £58 7s. 5d., leaving a balance in hand of £125 15s. 10d., a statement which was considered very satisfactory.

Mr. Martin R. Smith was re-elected president; the names of Messrs. M. Rowan (who, on account of ill-health, has retired from the committee) and V. Charrington were added to the vice-presidents, and a proportion of the outgoing members of the committee were elected, together with the names of Messrs. A. J. Rowberry and J. J. Sheldon, as new members of that body. The Floral Committee was re-elected, with the exception of Mr. Went, who retires; and new members were added in the persons of Messrs. W. Spencer and E. Charrington, the number being increased to seven. A communication was received from Mr. B. J. W. Grieve to the effect that, having regard to the financial position of the Society, the pruning knife should be applied to the schedule of prizes, and the number of prizes reduced to two only in each class; he also complained of the judging in Division 4, at the last show prizes having been given to dressed flowers which were staged as undressed blooms, and recommended that every encouragement should be given to undressed blooms, especially in the interest of amateur growers who are not skilful dressers, and that the use of cards and collars should be abandoned.

It was agreed that the attention of the judges should be given to the examination of the calyx of undressed flowers, and the following addition to the regulations was adopted: "There must be no manipulation of the calyx; a split calyx will be a disqualification." It was resolved that in classes 10, 24, and 34 the words "Carnations, Selfs, and Fancies" should read "Selfs, Fancies, and Yellow Grounds," Carnations being deleted. It was suggested that application be made to the Royal Horticultural Society for permission to have small supplemental exhibi-

tions of Carnations at the Drill Hall a fortnight before and a fortnight after the annual show, which is fixed for July 21, 1903. A new class is to be added to Division 4, to follow class 39, for three blooms each of six varieties shown in bottles, the wording to be the same as in class 10, and five prizes were allotted, as also the points the blooms would carry. An additional class was framed to follow the preceding, for single blooms of Selfs, any colour, prizes and points being also allotted. The two last prizes in the classes in Division 4 were withdrawn to supply the prize money in the new classes just created. The method of awarding Certificates of Merit to new varieties came in for some sharp criticism, and on the motion of Mr. F. A. Wellesley, seconded by Mr. A. W. Jones, it was resolved that "the granting of Certificates of Merit shall be vested in the Floral Committee. It shall be an instruction to that body that when awarding a Certificate of Merit, the variety shall also be classified. The judging of new varieties to take place after the judges' luncheon." It was understood that application would be made for a table to be set apart at which the Floral Committee would sit, and all new varieties would be brought to the table. No one but the members of the Floral Committee would be permitted to be near the table at the time. It would obviously be of great advantage to the representatives of the gardening Press if the awards to new varieties were made before, and not until after luncheon. The proceedings concluded with a hearty vote of thanks to the chairman for presiding.

### National Chrysanthemum.

The usual monthly meeting of the Executive Committee took place at the Royal Aquarium, Mr. Thomas Bevan in the chair. Among the correspondence submitted was a letter from Mr. W. H. Hawkins, Blackheath, who asked if one or two classes could be provided for amateurs residing in the smoky suburbs in London. The secretary suggested the letter should be referred to the Schedule Revision Sub-Committee, remarking that in the particular classes Mr. Hawkins referred to he, though residing at Blackheath, had to compete with growers in the Isle of Wight, Ashford, Hitchin, &c. The suggestion was approved. The prizes awarded at the December show, amounting to £59 7s. 6d., was announced, and also the medals awarded to miscellaneous exhibits.

An interim financial statement was submitted of a satisfactory character. The secretary announced that the cheques for the payment of the December prize money had been signed at the meeting of the Finance Committee. Acting upon a request made to the president, Sir A. Rollitt, at the annual general meeting in February last, which arose out of a point of order in relation to the voting powers of the delegates from affiliated societies not being members of the N.C.S., certain amendments submitted by the president were considered, and after considerable discussion a resolution was adopted thanking the president for his assistance in revising the rules; but expressive of some concern lest their adoption in the form in which he had submitted them might affect injuriously the support received from affiliated societies, and requesting Sir Albert to inform the committee whether he desires his amendments to be submitted to the annual general meeting as his personal propositions. An audit of the number of blooms exhibited at the November exhibition was submitted by Mr. A. Taylor, which comprised those staged for competition in the classes for cut blooms alone, and the figures were: Japanese, 1,797; incurved, 471; reflexed, 24; large Anemones, 108; Anemone pompons, 12; pompons, 114; singles, 18; in the three last classes bunches were counted as single blooms.

The chairman stated in answer to a question as to a future place of meeting for the society, that the committee appointed to make inquiries were negotiating, and he hoped in a very few days to be able to make a satisfactory announcement. Three ordinary members and one Fellow were elected, and the thanks of the meeting were given to the chairman for presiding. At the sitting of the Floral Committee in the afternoon nothing worthy of notice was submitted in the way of novelties.

### The National Auricula and Primula.

The annual general meeting of members of this society was held at the Horticultural Club, Hotel Windsor, on the 13th inst., there being a fairly good attendance of members, Mr. E. Colby Sharpin, one of the vice-presidents, in the chair. The annual report declared that the exhibition in April last was one of the largest ever held, and the sum of £11 6s. more was paid in prizes than in the previous year, so good was the competition throughout. Eight members had been lost to the society by death and removals, among them one subscription of £5, and ten new members had joined. As the balance in hand is small, a reduction in prize money was recommended, in order that the balance should not be wiped out in the next year. The balance-sheet showed an income of £92 6s., including £21 13s. 6d.



brought over from last year: the expenditure had been £85 19s. 4d., which included £69 12s. prize money awarded, a balance in the hands of the treasurer of £6 6s. 8d. being carried forward. The report and balance-sheet were adopted.

Some reductions of the amount of prizes in several classes was made to the amount of £8 or thereabouts, which appeared to be a wise proceeding in view of the present state of the society's finances. In the course of revising the schedule of prizes it was announced that class 10 for six green-edged Auriculas, in not less than three varieties, and not more than two of one variety, would read grey-edged instead of green.

Some conversation took place as to the pin-eyed character of some of the new varieties of Alpines, and it was reported that on the occasion of the Midland Auricula Show at Birmingham this year a resolution was passed affirming the importance of the judges of Auriculas asserting the old principle that a protruding style should be a disqualification. Class 31 was made to read instead of a basket of Primrose and Polyanthus plants, it should be a collection staged on a table space 4ft by 3ft, the plants in or out of pots. Sir John T. D. Llewelyn, Bart., was re-elected president; the vice-presidents were re-elected also, with the addition of the name of Mr. J. W. Bentley, Stakehill, Manchester; Messrs. T. A. Wellesley, J. Sargent, and S. Mortimer were elected on the committee, and Mr. T. E. Henwood re-elected hon. sec. and treasurer, with many thanks for his valuable services to the society. A vote of thanks was passed to the chairman for presiding.

### Newport (Mon.) Gardeners' Association.

The usual meeting of the above society was held on Wednesday, December 10, when a most interesting and instructive paper on "Insect Pests" was read by Mr. Reeves, head master of Crindan Schools. Mr. Reeves, who is an ardent enthusiast in the study of "creepy crawly" things, dealt chiefly with the woolly aphis, commonly called American blight. He pointed out, however, that it was not, as commonly supposed, imported from America, but exported from this country to America. It is easily distinguished by a woolly appearance on the growths of the Apple tree, causing a cankerous growth, and is most hurtful to the tree. By the winged females, which are seen from July to October, and by the wind, the blight is spread from tree to tree. It also goes to the roots of the trees during winter. This aphis is found all over Europe, not only on Apple trees, but on the young growths of many forest trees. In America the plan is being tried of raising a stock of aphis-resisting Apple trees, as stocks for grafting; the Northern Spy and Majetin are recommended as being suitable for that purpose. For the destruction of the blight 10lb of quassia, to be boiled in fifty gallons of water, to which add 10lb of softsoap. In using add one gallon of water to each gallon of the liquid. The Pear midge was also shortly dealt with. A discussion followed, in which Messrs. Sharratt, Kenward, Basham, Jones, Powell, and others took part. A hearty vote of thanks was accorded Mr. Reeves for his able paper, which was thoroughly enjoyed. Mr. F. S. Daniels presided over a good attendance of members.—J. PEGLER.

### CARTER'S OF FOREST HILL.

Primulas are as much a speciality with this firm at their Forest Hill Nursery in south-east London, as Cinerarias, Calceolarias, and Cyclamens are. They have been cross fertilising, as is necessary if progress is desired, and a number of their novelties are really very promising. Glancing at the already named varieties, in the first place the following are the more remarkable:—Holborn Carmine, Holborn Scarlet, Princess May, and Elaine among the singles. To the writer these were certainly the most pleasing. Elaine is a Fern-leaved variety, with large white flowers. Holborn Blue, Holborn Vermilion, Holborn Rose, Rose Queen, Holborn Carmine, and Holborn Salmon are described by their names. In habit each differs very slightly from its neighbour, the trusses being in all cases erect, handsome, well-formed, and of large size. Amongst the double varieties I fell particularly in love with Vivid, coloured a rich crimson amaranth. The trusses are very large. Aurora has decided pink flowers. Lilac Queen, Snowflake, and Carmine Empress are each first class varieties, the latter being slightly deeper in colour than a variety named Prince of Wales, which is rosy salmon. Snowflake is pure white at first, but becomes bluish-pink as it grows in age. Altogether about 10,000 plants are grown, and mostly in 5in pots. At the time of my visit, in the dull days of February, the operators were actively manipulating the camel's-hair brush to pollinate the flowers. Amongst the novelties, some of which are likely to be offered in commerce at once, are various crosses between such as the following:—Holborn Carmine x Hercules, Hercules x Holborn Blue, Holborn Scarlet x Holborn Vermilion, Holborn Blue with an ordinary blue Primrose, Ruby x Hercules, and others. I need not now describe the results of these crosses, but would add that in most cases the novelties are very fine, and represent new combinations of colour. The flowers have been increased in size and substance. A new variety, named King Edward VII. (Elaine x Bouquet), is a most beautiful sort, with splendid large flowers of a spotless white. The petals are nicely fringed and the foliage is very robust. This is a single flowered Primula, but its companion is here also, bearing the title Princess of Wales (a double), having a white ground speckled with rose. Carter's Brilliant Prize Cinerarias were promising most satisfactorily.

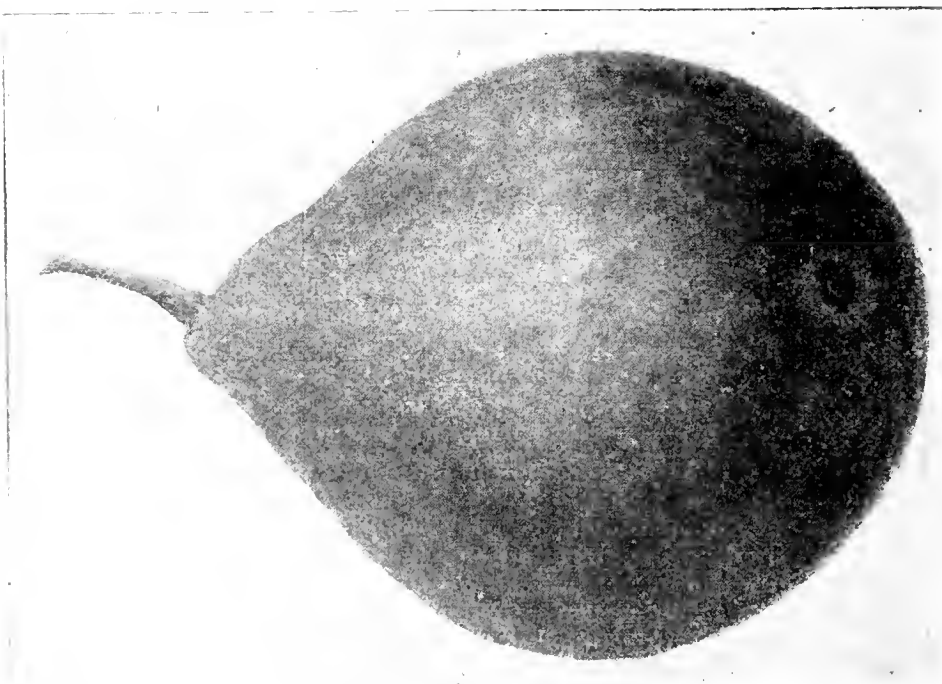
### A Curious Chair.

One of the most wonderful pieces of furniture in the world, a vegetable chair grown from a single seed, is in the possession of a Mr. T. P. Lukens, of Pasadena, California. A gardener in Korea planted a seed of the Gingko tree about twenty-six years ago. It grew into a creeper, which the gardener set about to fashion by ingenious twistings, compressions, and trainings into an arm-chair, much pruning and binding being necessary before his object was accomplished. The chair weighs more than 100lb, and is even harder, sturdier, and more imperishable than oak. It is 5ft 4in high and 25in wide. The bark has been removed, and the surface has taken a rich polish. The Gingko tree was one of the earliest types of vegetation to appear on the globe, extending far back into the cretaceous period.—("Sun.")

### The Brown Beurré Pear.

A variety one can highly commend, not, perhaps, for handsome appearance, but as a richly flavoured, juicy, melting dessert Pear, and though lacking, in our experience, in sugariness, it is, nevertheless, a fine eating fruit. Our illustration depicts the appearance of a typical fruit, looked at from the side. The Pear is generally about 3in. long by 2½in. broad. The skin is tough and moderately thick, not smooth, bronzy-brown in colour, and speckled with tiny dots of a lighter colour. The eye is set considerably to one side in a shallow basin. The Pear is firm and solid, a good keeper, and good traveller. To grow it well, it requires a wall, bearing freely as a cordon.—ED.

Brown Beurré does not rank among the higher favoured exhibition sorts, though all the same a most dependable Pear. Its name implies its skin colour; its size is medium, its cropping qualities most regular as an open air tree, and quality distinctly commendable. These are all-round attributes that cannot be attached to every good Pear. It is said to be a very old variety, and is certainly one deserving of better acquaintance. It is distinguishable in the greenness of the flesh immediately beneath the skin.—W. S.



The Brown Beurré Pear.



### Fruit Forcing.

**VINES: EARLIEST FORCED IN POTS.**—Where fermenting materials are employed in the pits, and the pots are placed on pillars, frequent additions of fresh leaves or sweetened material should be made as the heat declines. The heat about the pots must not exceed 70deg to 75deg; indeed, that temperature at the base of the pots is sufficient until the buds commence swelling, when the heat may gradually be increased at the roots by placing material about the pots, so as to have it between the degrees named by the time the Vines are coming into leaf. Increase the temperature of the house gradually after the buds are on the move from 55deg, so as to have it 60deg to 65deg by the time the shoots commence developing, allowing an advance to 70deg or 75deg by day, carefully admitting a little air at 70deg, and close early. Disbud as soon as the shows for fruit can be detected in the points of the shoots, reserving the most promising. Stop about two joints beyond the bunches, and pinch the laterals from the current growths at the first leaf, or remove them up to the bunches, allowing those beyond to extend as space permits; but this is usually limited in the case of Vines in pots, therefore retain no more foliage than can have full exposure to light, for to encourage more and afterwards remove it is disastrous.

Moderate moisture only will need to be applied by sprinkling where fermenting materials are employed, and where these are not at command an occasional damping with dilute liquid manure, such as guano, 1oz to a gallon of water, will be of service, while evaporation troughs should be kept charged with it at half-strength. This will give a perceptible smell of ammonia, as well as moisture, constantly, and modify the dry heat where it is solely derived from hot-water pipes. Water should be given carefully at the roots, as these do not move much until the Vines are in growth, and even then they do not require much water before the leaves are formed, and evaporation from them is considerable.

**EARLY FORCED PLANTED-OUT VINES.**—The buds of Vines started last month, even those subjected to no fire heat over 50deg and forced in previous years, are now swelling the buds, and a moist but not very wet condition at the roots. Making the soil sodden by needless waterings is very injurious, retarding instead of accelerating root formation. Raise the temperature gradually, say 2deg or 3deg in the course of a few days, so as to have it 60deg to 65deg at night, when the Vines come into leaf, and 70deg to 75deg in the daytime, with a little air at 70deg without lowering the heat, if only for a short time, so as to secure a change of air once at least in twenty-four hours. If the Vines have not been started early before, and are tardy in moving, ripe fruit being required by a given time, growth may be induced by a brisk moist heat of 70deg to 75deg in the daytime, it being important whilst the foliage is being made that a moderate temperature be employed in order to secure short-jointed wood and stout, well-developed foliage. Young Vines that have not been forced before will need more time, and all young canes must be brought down to a horizontal position, or lower, to insure their breaking the buds regularly. Some well-fermented short stable manure and leaves, placed in ridges on the inside border, will afford a genial moisture and warmth, and lessen the necessity for syringing, it being a bad plan to keep the rods dripping with water, which greatly accelerates aerial roots in pushing and developing.

**MIDSEASON HOUSES.**—Push forward the pruning of the Vines as they become cleared of the Grapes, for there is nothing like a long and complete rest for the Vines, which early pruning in a great measure secures. The Vines ought to be dressed, removing the loose bark, for it does nothing but harbour vermin, yet not going to the opposite extreme of peeling and scraping into the quick or live bark. Wash the rods with an insecticide properly diluted, such as petroleum emulsion, 4oz to a gallon of water, adding  $\frac{1}{2}$ oz sulphide of potassium, previously dissolved in a quart of hot water, to the paraffin emulsion solution, stirring well. Such, rightly administered with a stiffish brush, and every angle, crevice, and hole reached into thoroughly, taking care not to damage the buds, acts both as an insecticide and fungicide. The house also should be thoroughly cleansed, for it is essential that nothing be left undone which in the coming season is of consequence to the health of the Vines. All insects or eggs now cleared away mean the prevention of new colonies in the coming year on the Vines, from which they derive their subsistence, and it is far better to prevent than have to cure

diseases. The loose inert soil should be removed and fresh loam supplied, with an admixture of about one-fourth of well-decayed manure, a sprinkling of charcoal and old mortar rubbish being incorporated with the manure and loam, then a good handful per square yard of the advertised fertilisers sprinkled on the top will put food into the soil ready for the Vine roots to lay hold of in the next season of growth. Liquid manure may be usefully given where the soil is dry or even moist, provided always that the soil is not made dry or sodden. Keep the house cool and dry until the time arrives for starting. If they must be used for plants, keep the temperature at 40deg to 45deg by artificial means. More heat interferes with the resting of the Vines, and in a mean temperature of 50deg they start into growth.

**LATE GRAPES.**—The bunches should be examined at least twice a week for decayed berries, and the house kept cool and dry as consistent with the safety and preservation of the fruit. With the Grapes thoroughly finished, and the Vines leafless, a temperature of 50deg is suitable until the time arrives for bottling; any degree much below that is likely to cause mould and decay, and fire heat, especially at night, will undoubtedly cause the berries to shrivel immediately after the fall of the foliage. Some Grapes improve in quality after this is given, such as Gros Colman, which requires the most time on the Vines, while some soon pass into a red colour and shrivelled condition, especially Mrs. Pince, after the leaves are gone. No further time should be lost in getting the Grape room ready for the stock of keeping Grapes, which, as a rule, would be cleared off the Vines not later than the first week in January, expelling damp from it by the needful firing and ventilation. The Grapes keep better in a suitable room than on the Vines exposed to light, and they lose very little more weight cut than hanging, whilst the losses from decay are reduced to a minimum. Bottling affords relief to the Vines, insuring that perfect rest so essential to their well-being. It also admits of the Vines being started earlier in the spring, and this gives the kinds that require a long time of growth the full benefit of the summer's sun—its light and its warmth—where utilised by early closing, so that the Grapes may be ripened perfectly before the month of September is out.—ST. ALBANS.

### Kitchen Garden.

**POTATOES IN POTS.**—Early Potatoes may be successfully grown in 10in pots in a light, moderately heated structure. Drain the pots, and three parts fill with a compost consisting of old manure, loam, and leaf soil. Plant medium-sized, whole sets with the crown eye upwards, placing three sets in each 10in pot. The number of pots must be regulated by the space at command when growth is taking place, as light and air must be freely given at that period. Early Ashleaf, Ringleader, and Duke of York are varieties suitable for pot culture. The space left in the pots may be filled up with good soil when the growth is large enough.

**PREPARING POTATOES FOR FRAMES.**—Much larger quantities of early Potatoes may be grown in frames than in pots. These may be planted shortly; but in the meantime it is an excellent plan to prepare the sets by encouraging them to make early growth in gentle warmth and moisture. In order to do this place the tubers on end in shallow boxes, which stand in a light, warm position near the glass. With frequent sprinkling the eyes will soon push. As soon as they do, rub off all but the crown eye, which will be the largest and strongest. Under the influence of light it will grow strong and take on a deep purple colour, though more pronounced later in the season than at this early date. Medium-sized tubers are the best.

**TRENCHING GROUND.**—Vacant plots in the kitchen garden should be trenched deeply, especially where crops of Peas, Beans, and root crops are to be grown, and the land is either of a stiff, or a light, poor character. When stiff and difficult to work, trenching improves it, because the loosening of the upper layers allows of the weather acting upon it and pulverising it. The breaking up of the lower spit, which should always be done in trenching, permits of superfluous water draining away, while retaining sufficient for the needs of crops. Light and poor soil is improved, because trenching deepens the medium in which the roots of crops can work. The breaking up and intermixing with enriching materials also tend to permanent improvement, and what is of great importance, a more regular condition of moisture is ensured. A main principle to be kept in view in trenching is not to bring inert subsoil to the surface, and bury the upper layers, which are always the best. Trenching without manuring is beneficial, but the opportunity may be taken, when preparing the land for anything of a gross feeding character, to incorporate a liberal dressing of manure. Tap-rooted vegetables should, however, have the manure placed low down.

**LETTUCE AND ENDIVE.**—When the weather is open about this time the hoe may be run between the plants to lighten up the soil and prevent the rooting of seedling weeds. Plants in frames must receive plenty of air, decaying leaves being



picked off, which will prevent damping. During severe frosts it is best to protect.

**SPINACH.**—The winter Spinach is greatly freshened up and assisted by loosening the surface between the rows when the soil is dry. If the plants have grown well in the autumn, some of the largest leaves may be gathered for use in moderation, but the central leaves should not be touched. Any too-crowded plants may be pulled out.

**PEA AND BEAN STICKS.**—The opportunity should be taken of securing suitable branches from Beech, Oak, and Sycamore trees. Trim and point ready for use when other work cannot be done. After preparing Pea sticks, lay them flat on one another, and weigh down with logs to keep them flat.

**BURNING RUBBISH.**—The accumulations of rubbish in the garden should be placed together in a heap and burnt. When a good fire has been obtained, much of the wet and smaller rubbish, leaves, and weeds may be placed on it, which will cause the burning to be slower, and more in the nature of a smother. The material obtained is valuable to spread on the land.—E. D. S.



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**STREPTOSOLEN JAMESONI**, PLANTING (A. M., North Notts).—This very handsome greenhouse evergreen, scabrous-pubescent shrub would not succeed planted outside, and the growths introduced through the wall for training up the roof of a greenhouse similar to Vines, though it certainly is best planted out in a border; but this should be inside the house, being well drained, and a sandy, fibrous, loamy soil provided. A small plant may be accommodated in a pot, but when the plant becomes large it requires a tub, though it is better given a light, airy position, and planted out in a properly prepared border.

**ORCHID PESTS** (J. L., Leeds).—We found no insects in the box, though we examined the contents very carefully with a powerful lens. Either they must have escaped, though this seems impracticable, or been of so small and fragile a nature as to have been withered up. The decayed *Cattleya pseudo-bulb* points to attack and destruction by *Cattleya fly*, *Isosoma*, grub, or maggot, it entering the substance of and destroying the young growth. We do not know of any preventive, and the only remedy is to search for and destroy the grubs, an affected pseudo-bulb indicating it by the stunted and sickly appearance, with softness to the touch when gently felt between the thumb and finger.

**VINES FOR MIDSUMMER** (Oxon).—The selection of varieties you have made, or rather, ask our opinion of, cannot be surpassed for ripening at the end of June, namely Black Hamburgh, which of all Grapes is the best for general use, especially early and midseason, Foster's Seedling, an early and excellent Grape, and will hang for some time after being ripe in good condition, and Madresfield Court, which, when true, has large bunches and berries, oblong or oval, and of the greatest merit. Buckland Sweetwater is also an excellent early Grape. For early forcing, the Vines are best confined to an inside border, or at least until this is thoroughly occupied with roots; then they may be allowed to extend in the outside border, which should not be made until required, the apertures in the front wall to allow the roots to pass into the outside border being walled up until that time. We don't understand what you mean by pruning and planting the Vines at the end of May. If you mean not procuring the Vines until that time, and canes of the current year's raising, we say decidedly don't, for they will receive a check in transporting from the nursery, and not do well. Better procure the canes now, cut them down to within a couple of buds of the base, keep in a cool house and on the dry side, but not so dry at the roots as to cause shrinkage of the wood, and when the buds show signs of swelling, as they will in a cool house in March or April, turn out of the pots, remove the old soil, soaking if necessary, and plant, spreading the roots out evenly, and keeping the collar rather high, not covering the roots more than 3in. With a minimum temperature of 50deg the Vines will start into growth vigorously.

**VACANCIES AT KEW** (C. B.).—Your letter has been privately answered.

**SCALE ON FRUIT TREES** (Inquirer).—Your trees are infested with oyster scale, and they cannot flourish until it is destroyed. Dissolve 4oz of Gishurst compound or nicotine soap in a gallon of hot water, stirring well into it while hot a wine-glassful of petroleum, and apply carefully with a brush, rubbing well into all the crevices. If the mixture is hotter than your hand can be borne in it when applied, it will be more effectual. Trees that are in such a state as yours appear to be must have had their growth much checked, and this would act prejudicially on the roots. We should therefore remove some of the strong soil from them and add fresh, with much gritty matter, such as wood ashes, mixed with it, and mulch with partially decayed manure. It is a pity you did not act sooner, as we fear you will now have some difficulty in re-invigorating the trees.

**MOSS ON FRUIT TREES** (T. S.).—We have quite cleared moss from fruit trees by limewashing the trunks and main branches, and dusting freshly slaked lime liberally amongst the smaller branches and spurs when quite wet after a foggy or drizzling day. If there is no wind a man with the aid of a ladder may dress a good-sized tree in ten minutes, so that every side of every twig is reached, and the lime falling to the ground can be pointed in if needed, and will be beneficial to the roots. The lime should be obtained in lumps, then slaked into powder and used immediately. Having found this quite effectual we have not tried petroleum for the same purpose. If you consider lime unsightly, not only the Mosses and Lichens which so generally affect fruit trees, but the eggs of insects, may be effectually destroyed by dressing the trees in winter with a wash composed of a saturated solution of softsoap and common salt or brine. The trunks and large branches ought to be first scraped with a scraper made of old hoop or any other implement that may be improvised for the purpose, and when all the scales of bark are removed apply the mixture with a painter's brush, working it well into the crevices.

**FORCING SEAKALE** (J. E. B.).—Seakale may be forced in any place where it can be kept moist and dark in a temperature from about 50deg to 70deg. The milder the heat is the slower is the growth, and also the stronger; but the crowns must be in total darkness or the produce will be green, while if the roots and air be dry it will be tough. You may pack the roots closely together in pots, plunge these in a bed of manure and leaves, inverting other pots over the crowns; or you may pack a number of roots in a mixed fermenting bed and box the whole in with boards a foot or 18in above the crowns. In a quite dark place nothing of the kind for excluding light will be required; all that is needed in such a case is a humid atmosphere, gentle warmth, and regular moisture at the roots. Roots established in the ground, covered with pots, these covered to the depth of a foot or so with manure or leaves, will afford excellent Seakale. The thickness of the covering must be regulated by the heat. A stick forced into the mass to remain there, drawn out occasionally and grasped in the hands, will sufficiently indicate the temperature. If neither hot nor cold, but comfortably warm, it will be right for the growth of the crop. A certain number of crowns should be placed in heat or covered about every ten days to maintain a regular supply.

### Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

| Date.                  | Direction of<br>Wind. | Temperature of the<br>Air. |              |              |              | Rain.          | Temperature of<br>the Soil.<br>At 9 A.M. |                      |                      | Lowest<br>Temperature<br>on Grass. |
|------------------------|-----------------------|----------------------------|--------------|--------------|--------------|----------------|--|----------------------|----------------------|------------------------------------|
| 1902.<br><br>December. |                       | At 9 A.M.                  |              | Day.         | Night        |                | At<br>1-ft.<br>deep.                     | At<br>2-ft.<br>deep. | At<br>4-ft.<br>deep. |                                    |
|                        |                       | Dry<br>Bulb.               | Wet<br>Bulb. | Highest.     | Lowest.      |                |  |                      |                      |                                    |
|                        |                       |                            |              |              |              |                |  |                      |                      |                                    |
| Sunday ... 7           | E.N.E.                | deg.<br>27.6               | deg.<br>27.2 | deg.<br>35.5 | deg.<br>25.6 | Ins.<br>—      | deg.<br>37.1                             | deg.<br>43.0         | deg.<br>47.9         | deg.<br>18.3                       |
| Monday ... 8           | E.N.E.                | 35.0                       | 32.5         | 35.7         | 27.0         | 0.01           | 35.8                                     | 42.5                 | 47.6                 | 24.1                               |
| Tuesday ... 9          | E.N.E.                | 35.5                       | 33.2         | 37.1         | 33.0         | —              | 36.7                                     | 42.0                 | 47.2                 | 30.5                               |
| Wednesday 10           | E.N.E.                | 36.9                       | 35.0         | 38.4         | 35.2         | —              | 36.8                                     | 41.7                 | 46.9                 | 31.4                               |
| Thursday 11            | N.E.                  | 34.0                       | 32.5         | 35.0         | 34.0         | —              | 37.6                                     | 41.6                 | 46.5                 | 32.7                               |
| Friday ... 12          | S.E.                  | 32.3                       | 31.3         | 46.6         | 32.0         | 0.07           | 37.6                                     | 41.6                 | 46.3                 | 26.6                               |
| Saturday 13            | S.E.                  | 46.6                       | 45.9         | 52.6         | 32.0         | 0.02           | 38.7                                     | 41.5                 | 46.1                 | 25.4                               |
| MEANS ...              |                       | 35.4                       | 33.9         | 40.1         | 31.3         | Total.<br>0.10 | 37.3                                     | 42.0                 | 46.9                 | 27.0                               |

The weather has been dull, with very cold east and north-east winds, and a rise in the temperature towards the end of the week.

## Covent Garden Market.—December 17th.

## Average Wholesale Prices.—Fruit.

|                           | s. d. | s. d.   |      | s. d.                             | s. d.      |
|---------------------------|-------|---------|------|-----------------------------------|------------|
| Apples, Blenheims, bush.  | 7     | 0 to 10 | 0    | Grapes, Muscat ... ..             | 3 0 to 5 0 |
| „ culinary, bush.         | 3     | 0       | 6 0  | Grapes, Alicantes ... ..          | 0 9 2 0    |
| „ King Pippins, ½-sieve   | 3     | 0       | 4 0  | „ Colman ... ..                   | 0 9 2 0    |
| „ Cox O. Pippins, ½-sieve | 0     | 0       | 10 0 | Lemons, Messina, case             | 16 0 18 0  |
| Bananas ... ..            | 10    | 0       | 15 0 | Oranges, case ... ..              | 10 0 20 0  |
| Cobs and Filberts, lb.    | 0     | 5       | 0 0  | Pears, dessert, ½-sieve           | 3 0 6 0    |
| Figs, green, doz. ... ..  | 0     | 0       | 0 0  | „ stewing, ½-sieve                | 2 6 3 6    |
|                           |       |         |      | Pines, St. Michael's, each ... .. | 2 6 5 0    |
|                           |       |         |      | Plums, ½-sieve ... ..             | 0 0 0 0    |

## Average Wholesale Prices.—Vegetables.

|                                  | s. d. | s. d.  |      | s. d.                    | s. d.      |
|----------------------------------|-------|--------|------|--------------------------|------------|
| Artichokes, green, doz.          | 2     | 0 to 3 | 0    | Horseradish, bunch ...   | 2 6 to 0 0 |
| „ Jerusalem, sieve               | 1     | 6      | 0 0  | Leeks, bunch ... ..      | 0 1½ 0 2   |
| Batavia, doz. ... ..             | 2     | 0      | 0 0  | Lettuce, Cabbage, doz.   | 1 3 1 6    |
| Beet, red, doz. ... ..           | 0     | 6      | 0 0  | Mushrooms, forced, lb.   | 0 8 1 0    |
| Brussels Sprouts, ½-sieve ... .. | 1     | 6      | 0 0  | Mustard & Cress, pnt.    | 0 2 0 0    |
| Cabbages, tally ... ..           | 3     | 0      | 0 0  | Onions, bushel ... ..    | 3 0 4 0    |
| Carrots, new, bun. ...           | 0     | 2      | 0 0  | Parsley, doz. bnchs. ... | 2 0 0 0    |
| Cauliflowers, doz. ...           | 1     | 6      | 2 0  | Potatoes, cwt. ... ..    | 5 0 6 0    |
| Corn Salad, strike ...           | 1     | 0      | 1 3  | Radishes, doz. ... ..    | 1 0 0 0    |
| Cucumbers doz. ... ..            | 10    | 0      | 12 0 | Spinach, bush. ... ..    | 2 0 2 6    |
| Endive, doz. ... ..              | 1     | 6      | 0 0  | Tomatoes, English, lb.   | 0 5 0 6    |
| Herbs, bunch ... ..              | 0     | 2      | 0 0  | „ Jersey ... ..          | 0 0 0 4    |
|                                  |       |        |      | Turnips, bnch. ... ..    | 0 3        |

## Average Wholesale Prices.—Plants in Pots.

Most of the undermentioned plants are sold in 48 and 32-sized pots

|                                   | s. d. | s. d.   |      | s. d.                               | s. d.       |
|-----------------------------------|-------|---------|------|-------------------------------------|-------------|
| Aralias, doz. ... ..              | 5     | 0 to 12 | 0    | Ficus elastica, doz. ...            | 9 0 to 12 0 |
| Araucaria, doz. ... ..            | 12    | 0       | 30 0 | Foliage plants, var, each           | 1 0 5 0     |
| Aspidistra, doz. ... ..           | 18    | 0       | 36 0 | Grevilleas, 48's, doz. ...          | 5 0 0 0     |
| Chrysanthemums ... ..             | 6     | 0       | 12 0 | Lycopodiums, doz. ...               | 3 0 0 0     |
| Crotons, doz. ... ..              | 18    | 0       | 30 0 | Marguerite Daisy, doz.              | 8 0 10 0    |
| Cyperus alternifolius doz. ... .. | 4     | 0       | 5 0  | Myrtles, doz. ... ..                | 6 0 9 6     |
| Dracæna, var., doz. ...           | 12    | 0       | 30 0 | Palms, in var., doz. ...            | 15 0 30 0   |
| „ viridis, doz. ... ..            | 9     | 0       | 18 0 | „ specimens ... ..                  | 21 0 63 0   |
| Erica gracilis ... ..             | 8     | 0       | 9 0  | Pandanus Veitchi, 48's, doz. ... .. | 24 0 30 0   |
| „ hyemalis ... ..                 | 10    | 0       | 12 0 | Primulas ... ..                     | 4 0 5 0     |
| „ Caffra ... ..                   | 12    | 0       | 15 0 | Shrubs, in pots ... ..              | 4 0 6 0     |
| Ferns, var., doz. ... ..          | 4     | 0       | 18 0 | Solanums ... ..                     | 10 0 12 0   |
| „ small, 100 ... ..               | 10    | 0       | 16 0 |                                     |             |

## Average Wholesale Prices.—Cut Flowers

|  | s. d. | s. d.  |      | s. d.                                  | s. d.       |
|--|-------|--------|------|--|-------------|
| Arums, doz. ... ..                       | 8     | 0 to 9 | 0    | Lily of Valley, 12 bnchs               | 9 0 to 18 0 |
| Asparagus, Fern, bnch.                   | 1     | 0      | 2 0  | Maidenhair Fern, doz. bnchs. ... ..    | 6 0 8 0     |
| Bouvardia, coloured, doz. bunches ... .. | 6     | 0      | 8 0  | Marguerites, white, doz. bnchs. ... .. | 3 0 4 0     |
| Carnations, 12 blooms                    | 1     | 3      | 1 9  | „ yellow, doz. bnchs.                  | 1 6 2 0     |
| Cattleyas, doz. ... ..                   | 7     | 0      | 10 0 | Myrtle, English, per bunch ... ..      | 0 6 0 0     |
| Chrysanthemums, doz. bun. ... ..         | 6     | 0      | 12 0 | Odontoglossums ... ..                  | 4 0 5 0     |
| „ doz. blooms ... ..                     | 1     | 0      | 4 0  | Orange blossom, bunch                  | 2 0 0 0     |
| Croton foliage, bun. ...                 | 0     | 9      | 1 0  | Roses, Niphetos, white, doz. ... ..    | 1 6 2 6     |
| Cycas leaves, each ...                   | 0     | 9      | 1 6  | „ pink, doz. ... ..                    | 2 0 5 0     |
| Cypripediums, doz. ...                   | 2     | 0      | 3 0  | „ yellow, doz. (Perles)                | 1 6 3 0     |
| Eucharis, doz. ... ..                    | 3     | 0      | 0 0  | „ Generals ... ..                      | 0 0 0 0     |
| Gardenias, doz. ... ..                   | 4     | 0      | 5 0  | Smilax, bunch ... ..                   | 2 6 3 0     |
| Geranium, scarlet, doz. bnchs. ... ..    | 10    | 0      | 12 0 | Stephanotis, doz. pips                 | 0 0 0 0     |
| Ivy leaves, doz. bun. ...                | 1     | 6      | 0 0  | Tuberose, dozen ... ..                 | 0 9 1 0     |
| Lilium Harrisii ... ..                   | 6     | 0      | 7 0  | Violets, doz. bun. ...                 | 1 0 1 6     |
| „ lancifolium alb. ...                   | 2     | 0      | 2 6  | „ Marie Louise ...                     | 3 0 4 0     |
| „ l. rubrum ... ..                       | 2     | 0      | 0 0  | Xmas Rose, doz. ... ..                 | 1 6 2 0     |
| „ longiflorum ... ..                     | 6     | 0      | 7 0  |  |             |

## Trade Catalogues Received.

Barr and Sons, King Street, Covent Garden, W.C.—1, *Special cheap Christmas offer, List of fine Hardy Perennials for present planting*; 2, *Annual List (cash clearance sale) Spring Flowering Bulbs*; 3, *List of Surplus Stock (cash clearance sale) of Gold Medal Daffodils*.

James Carter and Co., 237, 238, and 97, High Holborn, London.—*Seeds, 1903*.

John Peed and Son, Roupell Park Nurseries, West Norwood, S.E.—*Hardy Trees, Shrubs, Climbers, &c.*

Sutton and Sons, Reading.—*Sutton's Amateurs' Guide in Horticulture, 1903*.

James Veitch and Sons, Ltd., Royal Exotic Nursery, 544, King's Road, Chelsea, S.W.—*Catalogue of Fruits*.

## TRADE NOTE.

Mr. Thomas Lewis, who has for many years past been connected with Messrs. W. Clibran and Son, of Altrincham, has resigned his position with that firm, and has been appointed to represent Messrs. John Waterer and Sons, Limited, The American Nursery, Bagshot, Surrey. Mr. Lewis' address will still be Fair Oak House, Routh Park, Cardiff.



## Christmas Foreshadowings.

Christmas comes but once a year;  
When it comes, it brings good cheer.

It is all very well arranging for festivals and times of rejoicing, but what if they do not come off? We need only look back six months and recall a time when our oxen and fatlings were killed, our tables spread, our flags hoisted, and we ourselves ready for the festal garment; but our feast did not come off. Our fatlings had been killed in vain. We dreaded and feared that our flags would have to fly half-mast high, and we feared to speak of the black garment that might be needed instead of the purple and fine linen. We approach our Christmas festival with cheerful hearts; we may add, thankful ones too. But it was about the festival. For how many centuries has this feast come and gone unaffected by time and change? Kingdoms have waxed and waned; principalities and powers have known alike glory and decay; and yet, year after year, on December 25 we lay aside our cares and rejoice that once more we are permitted to again greet with acclamation "The New Born King."

We know some folk consider we make this festival too sensual; there is too much talk of eating and drinking, and that the feasting often leads to gluttony and excess. No prince was ever yet born heir to an earthly throne but it seemed fit and right that high festival should be held, and if we, as a Christian nation, would remember to ask to our feast those for whom nothing is provided, we cannot see who should cavil. But we cannot feast with "the materials," and the materials have been amaking for long. They cannot be tossed up in a moment like an omelet or pancake, and industrious folk have been quietly preparing for the feast of 1902 for a long time back. What are the materials that come first? No Englishman need ask that question—'tis "the roast beef of old England"; but hark ye, friends, a whisper in your ear—is it not rather the roast beef of Scotland? We will not run down our own, but what about Aberdeen Angus? (We have something to say of this later.) Who are the great beef growers—the men who supply the Christmas market? They are not confined to one class, but come under three headings: the King (God bless him!), lords, and commoners. Yes, we are an agricultural people, and on the common ground of the show-yard we are all equal, and the man with but few acres may hold his own even with majesty.

Some of us like beef; others prefer the short-grained, juicy mutton. Mutton, perhaps, has more votaries than beef, it is so eminently suitable to the weakly digestion. The immature growth makes such nice small acceptable joints, and it is dear to the housekeeper inasmuch that the original joint may appear and reappear in so many different guises. Weight for weight, we think mutton to the man of small means is the most economical.

This is nowadays. It was not always so. We can remember the mutton of our youth—tremendously big, and oh! so horribly fat tallow! Even on a leg there were pieces that would sicken a pig, and then mutton, whatever its price, was an extravagant dish. But the fat, coarse mutton no longer exists. Such is the power of man, and such his skill in breeding, that we get well-proportioned joints, with a modicum of fat and the lean so cunningly interspersed with fat globules as to be deliciously moist and pleasant. We think every year sees an improvement in mutton.



We are sure we shall carry all with us when we say Christmas without pig would be but a sorry Christmas. There are those, and many of them, who cannot afford much of the beef and mutton which go to make the Christmas feast; but in the villages there are few who do not kill a pig at this festive season—indeed, it is often pig galore. He does make plenty in the house; every part of him is available, and we can eat him be he ever so fat. Pig is pig this year, dearer than we have known him for long; but, cheap or dear, he plays a prominent part in the bill of fare. What of all the other luxuries, the turkeys, the geese, ducks, and fowls? They are just putting on their last layer of flesh, and there will be busy times for the housewives. Naturally poultry is better to sell dressed than in the feathers, but the work of dressing and trussing is no small one when days are short and the light fails. Town folk have little idea of the time and thought and money that has been spent as they pass through the brilliant markets and make their choice from the good things spread out before them.

The best cheeses, too, are kept for Christmas. It used to be the fashion, and may be yet (though we think it is on the decline) of presenting friends with a ripe Stilton or good piece of Cheddar or Cheshire. Wensleydale is a cheese that has come much to the fore, and uncommonly good it is; but, like all other good cheeses, it must be allowed to mature.

We will go back to our beef and its producers. Fat cattle shows abound, but naturally Smithfield is the most important, though Birmingham, with its Bingley Hall, runs it very close. Norwich, we believe, in point of date comes first, then Birmingham, then London. It is simply marvellous to an outsider the amount of money, the value of the cups and plates which are given at each and all of these exhibitions. They fulfil their aim, however, and we find brought together the best possible stock in the world. We said His Majesty is an exhibitor. Yes, at Smithfield during last week he was represented by no less than twenty-five head of stock from his farms at Windsor and Sandringham. Talk of Farmer George—it is Farmer Edward. And again there is a Royal George there. The Prince is following in his father's steps, and secured a second with his red polled steer. We shall see him as a cup winner yet.

What exactly has His Majesty done at Smithfield? For Hereford steers, not exceeding two years old, he takes a first; also the breed cup and the cup for the best beast not exceeding two years old. For the steer not exceeding three years old, first; for shorthorn steers, first; for shorthorn heifers, not older than three years, first; breed cup, and reserve cup for best heifer; Highland breed: Highland steer, not exceeding three years, first, and a second for an older steer; then again a second and a third. A good record, we think.

The champion plate, the King's challenge cup, the cup for the best heifer, and the breed cup all go to Lord Strathmore and Kinghorne of Glamis, and the beautiful heifer which wins him all this is Layia of Glamis, an Aberdeen Angus. She thus repeats her Birmingham victory. There she won for her fortunate owner silver cup for best animal, Messrs. Elkington's challenge cup, Joseph Thorley's challenge cup, Messrs. Webb's ditto, and also Messrs. Tipper and Sons' challenge prize, and the Maismore Park challenge cup—five cups and a prize at Birmingham, and in London her class and breed prize, champion plate, and two cups. These cross-bred beasts are bad to beat. They take so kindly to forcing, and come to the ring and afterwards to the block in such beautiful condition. No boiling pieces about them.

For sheep the Leicester prizes go, as usual, to Ernest Jordan, Driffild. We wonder how many prizes he and his late father secured with this breed? For Lincolns, Henry Dudding is to the fore, and he wrests from Mr. Jordan the challenge plate (£50) for long wools. One man did not live to see his triumphs with Southdowns. Colonel McCalmont, whose sudden death on Monday will be much deplored, took a breed cup and some first, second, and third prizes. The best pig man at Birmingham, Mr. A. Brown, was also to the fore at Smithfield.

In the Barley competition we wish date of sowing had been given. We generally notice that it is the earliest sown Barley that comes out best in quality. To say the root exhibits were like wax models is perhaps to disparage them. What we mean is that they are so perfect in symmetry and

shape as to give the idea of being all cast in one mould (that is, the different varieties).

While on the subject of roots we were much struck by an account of Turnip growing extraordinary, in the "North British Agriculturist" of November 26. The Stirling Agricultural Society offer prizes for roots open to the counties of Stirling, Dumbarton, Clackmannan, Kinross, and the Western districts of Perth and Fife. The entries were seventy-five. In these competitions Captain Stirling carried off five first prizes out of six, the only first that escaped him being for crops grown on carse land, of which he had none. The winning crop of Swedes weighed 37 tons 15½ cwt., while the yellows weighed 39½ tons 3½ cwt. Who says Turnip growing is a failure? Well, the gallant Captain deserved a good crop, for he did not neglect to feed his land: 25 tons per acre of farmyard manure, 1 ton ground lime, 2 cwt superphosphate, 2 cwt dissolved bones, 1 cwt bone-meal, and a dressing of sulphate of ammonia, quantity not given. We wonder how the Barley will stand next year? There ought to be a bumper crop.

### Work on the Home Farm.

Swede Turnips are still as they were. The rain had no sooner cleared up than frost set in, accompanied by slight snow. The frost was not severe enough to injure the roots we hope, but it has spent a week, and we are very near Christmas. Though it is milder to-day there is a little bone left in the top soil, and we cannot begin on the Swedes until to-morrow. That labour is not very plentiful is evidenced by a neighbour having to advertise for men to pull Swedes. Now the Irishmen have nearly all gone local men will find ample employment.

As we had no manure ready to cart out, we employed the frosty days in covering a big heap of Potato haulm with soil. Some people burn Potato tops, and it is an easy way to get rid of them, but, if a spare corner can be found, they make excellent compost in a year or two. The space beneath the shadow of a large hedgerow tree may be used for this purpose. To get the haulm to decompose quickly a covering of soil is necessary. If the heap is turned over after twelve months it will be ready for use the following year.

An objection to making manure of Potato tops is the fear that by so doing we may be storing up the germs of disease, and we certainly think it unwise to use for a Potato crop manure which has in it any Potato residue; but to carry out that idea to the full we must not use for Potatoes the manure from a yard where pigs have been fed with raw diseased Potatoes, but that is constantly done, and especially on small farms, where the pig is such an important animal. The soil we cover the haulm with we get from the side of a bye-road. We ploughed five or six furrows from each side, and there will be occupation for more frost-bound days later on. There is a similarly made heap ready to use, but we shall keep it for a really severe time and put it on grass.

Sheep were very comfortable on roots during the frost; we fear the lair will be bad after the thaw. Turnips are a prodigious crop. At our Christmas fat-stock auction the supply of mutton will be very small in spite of all the auctioneer's efforts. There will be a good supply of cattle and probably a good trade. Small pigs have been plentiful and fairly cheap, but fat pigs are being killed freely, and small ones are wanted to occupy the sties, so prices are rising again. If all breeders were as fortunate as a small occupier in this place the pig market would soon be glutted. His sow (second litter) has fourteen pigs, and all doing well.

Bacon pigs are said to be somewhat disappointing when they are put on the weighing-scale. Well! good meal makes good bacon, but damp, badly-got corn, which cannot be sold, is very dear stuff to feed pigs with, and there is too much of such rubbish being used just now.

We have received for review copies of the Doggie Wall Calendar for 1903, issued by Spratt's Patent, Limited, 24 and 25, Fenchurch Street, London, E.C. We notice that there are eight portraits of prize dogs, comprising pointer, Scottish terrier, bulldog, toy Pomeranian, Airedale, retriever, Great Dane, and fox terrier. They are all reproduced by half-tone blocks on art paper. At the back of each picture is given detailed technical information as to the points of breed depicted. There are also illustrations of prize turkeys and of cage birds by Mr. Lydon. The firm have introduced a new feature this year, by means of which each month, as dispensed with, need not be torn off, but can be kept for reference at back. To those of our readers who make early application Spratt's Patent, Limited, will be pleased to send a copy on receipt of penny stamp for postage addressed to Almanack Department, Spratt's Patent, Limited, 24, Fenchurch Street, London.

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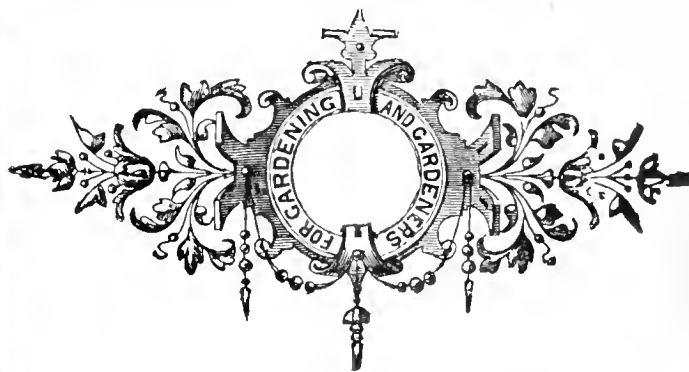
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## Journal of Horticulture.

THURSDAY, DECEMBER 25, 1902.

## The Craze Against Size.



It is well known that there was at one time, in all departments of horticulture, fruit, flowers, and vegetables, a craze for size, especially for specimens intended for exhibition, and among vegetables I think this craze is not as much subdued as it should be. In flowers I do not think matters were ever as bad as people tried to make out; the National Rose Society never gave way to it, never commended Paul Neyron, and is at the present time, if anything, rather inclined to undervalue size. As to Chrysanthemums, I will say nothing; personally, I do not like the show varieties, but have not sufficient knowledge of them to make any criticism. In some fruits the craze for size may have led to a neglect of other good qualities, and in many vegetables, as I have said, size, smoothness, and appearance seem still to me to be too much thought of.

It is, of course, a very great mistake to think that because a thing is big, therefore it is good. I remember, some years ago, at the cottagers' show in the next parish, someone offered a prize for "the biggest Potato in the show," which I promptly met by offering a special prize at the show in my parish for "the best Potato." The tuber thus singled out was naturally taken as a pattern, and quality improved immensely in the next few years. There were, of course, a great many others, all over the kingdom, teaching in a practical way the correct doctrine of quality rather than size, even in show competition, and their views gradually prevailed. Unfortunately, there is a state of things known as "the swing of the Pendulum," which generally occurs in all cases of revulsion of feeling from preconceived opinions. The Pendulum, having reached its highest or extreme on one side, falls back, and

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will not remain upright true and straight in the middle of the curve, but straightway goes beyond it, higher and further, almost to the opposite extreme. So it is with all social human opinion.

People have now, in some departments of horticulture, begun actually and openly to look upon size as a fault in itself, which, in my humble opinion, is as great an error as the other. According to the views of such people, a horticultural product cannot be good if it is big—above the medium average size. If your soil, situation, or manner of cultivation is such that you cannot get size, it is very easy to pose as one who despises mere bigness and goes in for quality only, leaving it to be implied that size and quality cannot go together. Being personally a man whose stature may be reckoned by yards, I have heard a good deal in my time of such aphorisms as "The best goods are done up in small parcels," &c., and—oh! well, it may be true enough as far as I am concerned, but I demur to it as a universal axiom.

A favourite old Plum was the *Magnum Bonum*; but according to some modern views a fruit cannot be bonum if it is magnum. Perhaps Mr. Bunyard can tell us if the reason why *Roundway Magnum Bonum*, which he asserts to be the best of all dessert Apples, is so seldom grown, seen, or heard of, is simply because it is too big.

I protest against the 3in ring rule for dessert Apples, as put forth by the R.H.S., and now generally adopted. I think it was at first only applied to *Blenheim Orange*, but (if I am not mistaken) at some shows it governs now the whole of the dessert Apple classes. If I asked the reason for it I am told that large Apples are no use for dessert; if carried round no one would take them. But is the Royal Horticultural Society to be influenced and ruled by butlers and footmen? or to guide them in their manner of offering and dealing with the choicest fruits? I never heard of any difficulty in dealing with *Pitmaston Duchess* Pears or large Melons. I suppose there would be no difficulty in cutting the larger Apples, or some of them, once across, or handing round slices, as of Melons, for, to my taste, an Apple is a far better fruit than a Melon.

But it will perhaps be said people will not have the larger Apples for dessert. Well, if they are wrong, as I think they are, they should not be yielded to, but gently educated to see the very obvious reasons why a good big Apple is much better than a good little one. What part of the Apple do you want to eat? The rind and core, or the flesh? I have seen a first-prize collection of six sorts of dessert Apples, wretched little things, some of them, not much bigger than *Siberian Crabs*, where I am sure I could not get a decent mouthful anywhere without having at the same time a lot of core and pips and eye, whether the fruit was peeled or not; whereas, with the half of a good big *Blenheim* or *Ribston* you may get a real good and enjoyable bite of the finest fruit the world produces. For my own part, I think a 2in ring minimum would be much more to the purpose.

Now, if anyone suggests that this letter is a clamour for size at the expense of quality, I would point out at once that it is not so. I only wish to assert that it is possible for a flower or fruit or vegetable to be bonum as well as magnum, and magnum as well as bonum, and that in some fruits there is an especial advantage in size, in that the edible part is more comfortably and conveniently presented, and more free from impediment.—W. R. RAILLEM.

#### The Romans and Soil Fertility.

At the last meeting of the Linnean Society, Dr. George Henderson called attention to a passage in the *Georgics* of Virgil, in which the poet, after recommending a system of fallowing, proposes, as an alternative means of restoring the fertility of the soil, that before taking a second grain crop the soil should be fertilised by planting it with a leguminous crop. The Romans believed that these plants actually enriched the soil, especially if the roots were plentiful. It is remarkable that recent discoveries regarding the nitrification of the soil by the roots of leguminosae should have been foreshadowed so long ago by a people who could have known nothing of chemistry or vegetable physiology.

## Methods of Propagation.

Recently in looking over some of my manuscript papers on horticultural subjects, which were written some years ago when working up for an examination in horticulture, I found one on methods of propagation. This is a very interesting subject, so perhaps a few notes may not be out of place in our Journal, and useful to some of its readers. There are many ways by which plants may be propagated; but, of course, the most natural method is by seeds. The great majority of plants are reproduced in this way, and a great deal might be written on this alone. In these notes, however, it is intended to dwell upon other methods of propagation. At the same time, a few points to be remembered in connection with propagation by means of seed may be alluded to. All plants that bear flowers may be increased by seeds. These should be large of their kind, heavy, plump, and well developed. All seeds contain reserve food material, which is either stored in the embryo plant itself, or surrounding it. To produce a plant from a seed it must be put in the ground to germinate.

The essential points in germination are moisture, warmth, and fresh air. No seed will germinate in a temperature below freezing point; a temperature of about 40deg or 42deg F. is required, although the seeds of many plants will germinate in a lower temperature. Moisture is necessary to soften the tissue, as the food contained in the seed is in an insoluble condition. Water enables the insoluble reserve material to assume a soluble form. Fresh air, or oxygen contained in it, is necessary for the carrying on of these chemical changes. If seeds are buried so deeply that air cannot reach them germination will not take place. When germination commences, and the embryo begins to grow, by using up the soluble food, several changes take place. One of the most important is the changing of starch into dextrin, through the influence of a nitrogenous substance (diastase), which acts as a ferment.

#### Cuttings.

This is an easy way of propagating plants, and of keeping them true to the character of the parent. Different parts of the plant may be used for cuttings. Sometimes the young, growing, leafy shoots are best; in other cases the ripened or partly ripened growths are used. Then there are leaf cuttings and root cuttings. Roots are generally formed at a node or joint, but some plants will also emit roots at any part of the stem. Softwooded cuttings, as a rule, require a warm, moist temperature and a close atmosphere to enable them to root quickly and well. Cuttings made of the ripened shoots will naturally be longer in forming roots. In the case of fruit trees, Conifers, and hardy deciduous trees and shrubs are best inserted in the autumn, August and September being suitable months for Conifers and Roses, while October will be best for such things as Gooseberries, Currants, &c. Cuttings of most hardy plants may be inserted in lines on an open border. It is a good plan to add some sandy soil in the trench, on which the base of the cutting may rest, and the soil should be made very firm round it. I find some plants, such as Tea Roses and Conifers, take root better in pots. They are best stood in a cold frame when inserted; but on the approach of severe weather should be removed to a structure from which frost is excluded. In spring, if introduced to a gentle heat, the process of rooting will be greatly facilitated. Some plants may be increased by leaf cuttings, such as Begonias and Gloxinias. The leaves may be inserted by the petiole, but the base of the leaf must also be in the soil. Another method is to lay the leaves flat on the surface of the soil; before doing so the main ribs of the leaf should be notched at intervals. Roots will be emitted from these notches, and several plants will often be produced from a single leaf. An important point to bear in mind when inserting a cutting is to make sure that the base of it rests firmly on the soil. Inattention to this particular is a frequent cause of many plants being lost.—J. S. UPEX.

(To be continued.)

#### Malmaison Carnations.

Respecting the photograph of *Malmaison Carnations* reproduced on page 565, we incorrectly stated that Mr. G. H. Cook, the sender of the photograph, was head-gardener at Milburn, Esher. Mr. Cook is foreman in the gardens there.



**Cypripedium × William Lloyd.**

This is one of the handsomest *Cypripediums* in cultivation, and stood out prominently in Messrs. J. Cypher's collection at a recent meeting of the Royal Horticultural Society in London. It is a hybrid from *C. bellatulum* and *C. Swonianum*. The upper sepal, like the whole flower, suffused with purple-rose, with darker veins; the petals are heavily blotched.

**Vanda Kimballiana.**

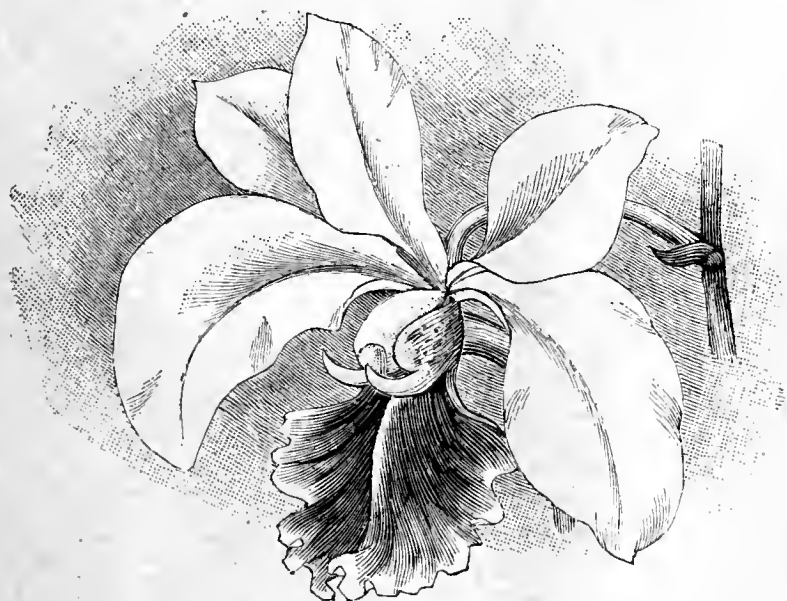
This beautiful species flowers generally in autumn, throwing scapes 12in to 18in long, bearing several flowers apiece. The flowers are nearly, or quite, 2in in diameter, with white sepals and petals, sometimes flushed with pale purple. The lip is three-lobed, the side lobes small, yellow, and spotted with red-brown. The central lobe is of a bright amethyst-purple, the spur light purple, and about 1in long. The species is a native of Burmah, and requires the temperature of an intermediate house.

**The Week's Cultural Notes.**

The *Anæchtochilus*, and several other nearly related genera, are by no means generally cultivated or well done by growers. Yet the culture of many of them is not difficult if a few of the principal details are carefully gone into. I think that more of these lovely plants have been killed by too abundant heat and a close atmosphere than anything else, closely-fitting bell-glasses and handlights not being at all to their taste. Whatever is used to cover them, there should be a constant supply of air coming through, the bellglass or handlight being raised slightly at the bottom and a small hole provided at the top.

This prevents condensed moisture falling upon the beautiful foliage, and, what is equally important, renders the stems hard and firm, capable of withstanding any slight check that may occur even with the best care. At present the plants are taking very little water, the growth being, comparatively speaking, at a stop, but the roots are always slightly active, and a perfectly dry state must be avoided. Watch carefully now for signs of red spider or thrips, and as soon as any are seen have the whole of the plants removed from the cases and well sponged. This can do no harm even if insects are not present, as fumigation is dangerous to them, and sponging may prevent its becoming necessary.

Several of the *Pleiones*, such as *P. lagenaria*, are beginning already to root in the new compost, and must be kept under close observation. Light waterings at first, with a position where abundant light reaches them from all sides, are necessary, increasing the water supply as the roots develop. The later flowering species should have attention immediately the flowers are past, or the new roots will begin to push and be damaged in the repotting process. Not a drop of water should be allowed around

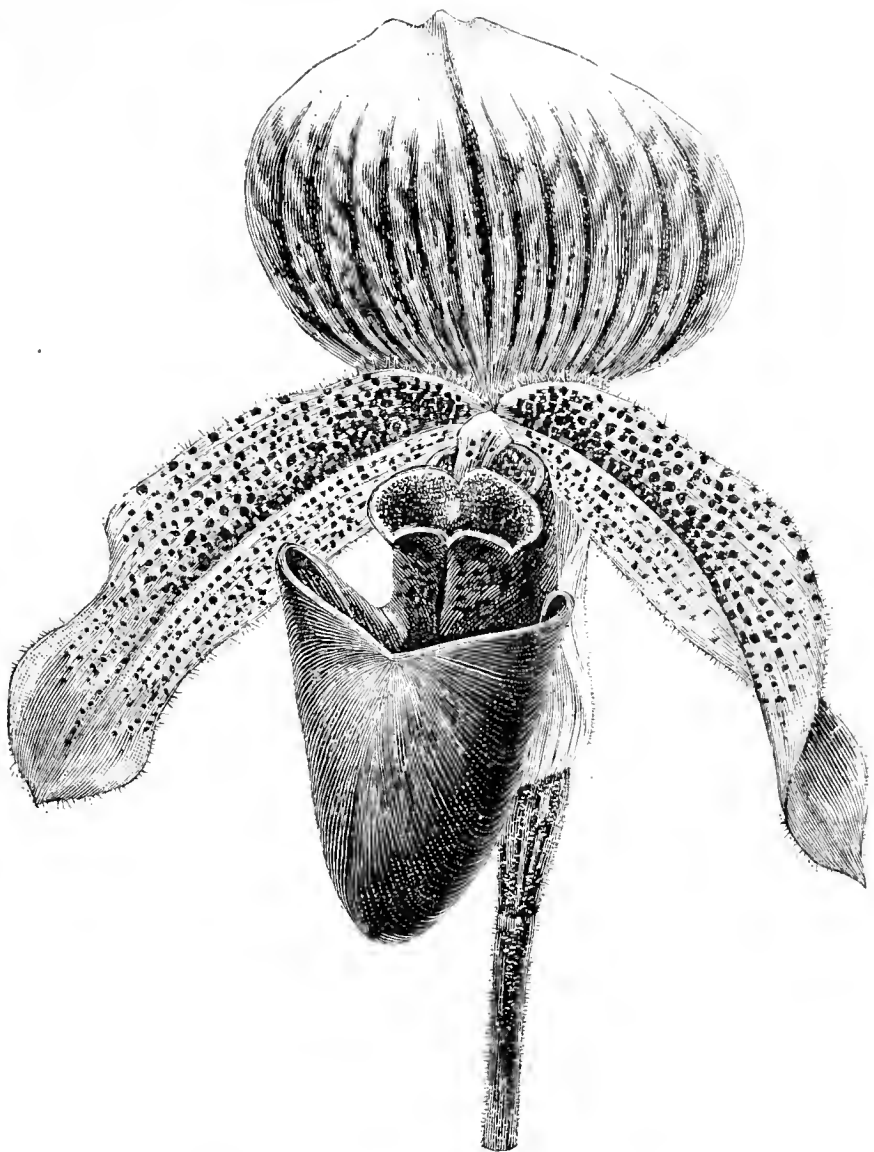


**Vanda Kimballiana.**

the bulbs at first. They have ample substance in them to keep the young shoots going, and the dry compost is best for the new roots when they appear.

The later repotted *Cattleyas*, such as *C. gigas*, *C. aurea*, and even *C. Bowringiana*, are now well established in their new pots, the freedom given to the new tiers of roots having served to

swell up fine new growths. The quieter these are now kept the better, a thorough rest strengthening the plants and tending to



**Cypripedium × William Lloyd.**

vigour in the young growth. Keep *C. Warneri*—the spring flowering *C. labiata*—well up to the glass, and allow sufficient water to prevent the least sign of shrivelling. The same remark applies to the cool house species, *C. citrina*.—H. R. R.

**ROSES NEAR LARGE TOWNS.**

At the monthly dinner of the Horticultural Club, presided over by Mr. Harry Veitch, at the Hotel Windsor, on the 9th inst., Mr. Herbert Molyneux gave a most interesting and instructive paper on "Roses near Large Towns," in which he gave the results of intelligent culture well within the area affected by London smoke. He pointed out that one of the chief causes of the failure which attended so many amateur attempts at Rose growing under similar conditions, and which led to a popular belief that success was impossible, was the fact that in most cases the plants were purchased at auction, which involved generally an unduly prolonged exposure of the roots to the air, and a consequent loss of vitality, which was eventually increased by the injudicious method of dibbling in adopted by the jobbing gardener.

Success could only be obtained by planting Roses freshly acquired from the nursery, and protecting the roots as much as possible prior to their installation in properly prepared stations. This done, with judicious syringing with water, and, when needed, with insecticide infusions, the foliage could be kept in a clean and healthy condition, with the result that an abundance of splendid flowers eventually richly rewarded the extra care involved. A real, and not a merely professed, love of flowers was essential, and if this existed the trouble involved was a pleasure, and, in any case, experience had proved to the lecturer that it was the laziness of the amateur rather than the atmospheric conditions which led to the great bulk of the failures. Messrs. Geo. Paul, jun., H. Veitch, E. T. Cook, J. Hudson, and others discussed the paper fully, and confirmed its conclusions throughout, the last named gentleman's work at Gunnersbury under similar handicapping conditions forming full practical confirmation in itself. A hearty vote of thanks was coupled with a request for a further paper dealing with other points, and this was promised.



# NOTES & NOTICES

## Appointment.

We learn that Mr. William Bygrave, late of Rous Lench Court, Evesham, was appointed in May last as head gardener to H. Stafford O'Brien, Esq., Blatherwyke Park, Wansford, Northamptonshire.

## Royal Horticultural Society.

The first meeting of the committees of the Royal Horticultural Society in 1903 will be held as usual in the Drill Hall, Buckingham Gate, Westminster, on Tuesday, January 13. An election of new Fellows will take place at three o'clock. To prevent misunderstanding, it may be mentioned that the committees of 1902 do not vacate office until the date of the annual meeting, 1903, and in like manner all Fellows' tickets of 1902 are available until the end of January, 1903. At a general meeting of the Royal Horticultural Society held on Tuesday, December 9, fifty-one new Fellows were elected, making a total of 1,140 elected since the beginning of the present year.

## East Anglian Daffodil Show.

The hon. secretaries (Messrs. J. Andrews and A. E. Stubbs) intimate that the scholars of the Middle School for Boys and Endowed School for Girls at Ipswich have, through the kindness of Mr. T. E. Cattell and Miss G. Beatrice Harrison, been able to place amongst the scholars over 1,200 bulbs for competition at the above show, to be held in the Public Hall, Ipswich, on April 22 next. Each competitor has been supplied with five bulbs, instead of three bulbs as last year, and that is owing to the kindness of leading English, Scotch, and Irish bulb growers.

## Some Old Apple Trees.

Seymour Keyser, of Manheim, Herkimer County, N.Y., has two old Apple trees on his farm that are record breakers. One of them is 12ft in circumference. It is a Holland Pippin, and was brought from Holland in the latter part of the seventeenth century. The tree is still bearing fruit. Another tree fell to the ground over half a century ago; the body of the original roots have long been decayed. The top of this tree has taken root, and receives its nourishment from the lower end of the top of the original tree. The Apples are of the Rustycoat variety. This tree was also brought from Holland at the same time as the first mentioned, and is also bearing fruit.—"Country Gentleman."

## Birmingham Gardeners' Association.

At the fortnightly meeting of the members of this society, Mr. J. Udale, chief horticultural instructor for Worcestershire, Droitwich, was responsible for an able lecture entitled, "Hardy flowering shrubs, with relation to landscape gardening." The essayist strongly advocated the massing of flowering and ornamental foliage shrubs of one kind, or species and varieties alone of one colour or a combination of suitable blendings to produce striking pictorial effects, in preference to the indiscriminate or intermixed system of planting, where ample space would allow, such as, for instance, public parks, extensive private pleasure grounds, of the manse, and large villa grounds, also, of course, in a most limited degree in the small villa garden.

## Formation of a British Botanical Association.

For the purpose of promoting a closer study of the science of botany, a company is being formed at York, and it is to be known as the "British Botanical Association." The intention is to take over the educational department established a couple of years ago by Messrs. James Backhouse and Son (Limited), in connection with their York nurseries, and to carry on their investigations on systematic lines. The property to be acquired consists of an acre and a half of land, a suite of laboratories, and a number of greenhouses. The association are to extend their work to practical agriculture and kindred industries by offering facilities for accurate seed testing and the investigation of plant diseases. The scheme offers no speculative attraction. There will be no share capital, the liability of members being limited by guarantee only in addition to a small annual contribution to meet expenses.

## Chrysanthemum, Lord Alverstone.

Mr. Godfrey writes: "An error has crept into my letter, on page 566 of last week. I meant; in respect to Lord Alverstone, that I had some very fine blooms on plants less than 2ft in height, but the three blooms I placed before the R.H.S. Floral Committee were not 'past,' but were 'passed' (by the Committee), so I suppose I over-estimated them."

## Free Speech in Liverpool Parks.

Since the lamentable Kensit affair the Parks and Gardens Committee have been seriously considering the advisability of allowing meetings to be held in the parks, but as yet it does not appear likely to be fulfilled. A bye-law distinctly states that no such meetings shall be allowed, and this the committee do not feel justified in having altered. From various opinions expressed, it seems at present all in favour of the parks being kept as heretofore, viz., a place for quiet recreation, where the public may find rest from the turmoil of the busy city, and be free from any irritating consequences such meetings might probably entail.—R. P. R.

## New Recreation Ground for Seacombe.

Last week there was opened, in connection with the Urban District Council of Wallasey, a central recreation ground, situate in Seacombe. The position is a beautiful one, overlooking the River Mersey. For the space at command, the shrubbery arrangements have been placed to very great advantage, whilst the fact has not been lost sight of that, here, in this populous district, the rising generation must be catered for, suitable provision in the way of swings, &c., having been carefully considered. For the more mature members, bowling greens of large dimensions cannot fail to be of great advantage. Much levelling has been required, the whole reflecting the greatest credit on Mr. Rooking, the parks superintendent, whose work has been well executed.—R. P. R.

## National Dahlia Society: An Appeal.

We have received the following letter addressed to the members of the above society: At the annual meeting of the London Dahlia Union, held on November 4 last, at the Royal Aquarium, the chairman, Mr. John Green, announced his intention of giving a ten-guinea challenge cup, to be competed for in the premier amateur class for Cactus Dahlias at the annual exhibition of the London Dahlia Union, the cup to become the property of the winner if won for three consecutive years. This liberal offer of Mr. Green's places the London Dahlia Union in a position to offer a considerably greater attraction to amateur exhibitors than the National Dahlia Society. Although the supporters of the Dahlia are doubtless united in wishing success equally to both societies, I feel sure that the members of the National Dahlia Society would regret to see this society placed in a position of secondary importance, and I therefore venture to suggest to my fellow members that an endeavour should be made to raise the sum of twenty guineas by subscription, for the purpose of offering two ten-guinea challenge cups, one to be offered in the premier Cactus Dahlia class for nurserymen and the other in the premier Cactus Dahlia class for amateurs, the cups to become the property of the winners if won for three consecutive years. The National Dahlia Society numbers 160 members, and if each member would be willing to subscribe 2s. 6d., a sum of £20 would thus be raised, which I should be happy to increase to twenty guineas, in addition to paying the expenses of the printing and sending out of this appeal, and acknowledging all subscriptions sent to me. Although a member of the committee of the National Dahlia Society, I may say that I am making this appeal simply as a private member of the society to my fellow members. All subscriptions sent to me will be duly acknowledged, and handed over to our hon. treasurer, C. E. Wilkins, Esq., together with a list of the subscribers and the amount of each subscription. Might I venture at the same time to make another appeal; which is that each member of the society should make an effort to introduce at least one new member for 1903? If this could be accomplished, and each new member subscribed no more than 5s., the result would be an important addition to the income of the society, thus enabling better prizes to be offered at the annual exhibition, which could hardly fail to increase the competition and improve the all-round quality of the exhibits.—P. W. TULLOCH, "Sterndale," New Church Road, Hove, Sussex, December 11, 1902.

**The Education Bill.**

We should much esteem the favour of an early intimation in your columns that the St. Bride's Press, Limited—who are the proprietors of "The County Council Times," the official organ of the county councils and of various educational associations—will publish on the first day of the New Year a weekly paper, to be called "Education, Primary, Secondary, and Technical," which will deal mainly with the work of the authorities under the Education Bill.—THE ST. BRIDE'S PRESS, LIMITED.

**Christmas, 1902.**

How hurriedly the weeks, and the months, and the years pass by! And one seems ever to be planning to give the swift recurring events the attention they properly deserve, but one's endeavours often lack completion before the subject of the day is upon us and passing into history. It is so with gardeners, as it is with editors. It is the reply of honest workers that they do their best, and it should be a watchword with everyone. We are now at Christmas, 1902, and, while the period is one of Christian rejoicings, it is also a time at which we all look forward on the work of another year. May this New Year be completed with very happy recollections and satisfaction in the minds of each Journal reader, and at this present, may Christmas be really Christmas to all.

**Luther Burbank of Santa Rosa, Cal.**

Luther Burbank, who may well be given the title of America's most practical hybridist and plant breeder, now of Santa Rosa, Cal., is a native of the East U.S., having been born in Lancaster, Worcester County, Mass., March 7, 1849. Wherever plant improvement is known and studied there Burbank's fame goes also. He seems to be possessed of a genius for breeding plants, and it was a source of universal regret that this great exponent of the art could not arrange to have been present at the International Conference on Plant Breeding and Hybridisation which lately was held in the city of New York. He contributed, however, to the proceedings of the conference a very interesting and suggestive paper, in which he wished to show how the question of plant breeding was as yet merely touched upon by those who were interested in it. The few statistical observations he made are appalling in their significance. To think that one grain per ear of Wheat would add to the yield of the country fifteen million extra bushels, and that one Potato more to each hill would increase the yield by twenty-one million bushels! Luther Burbank was the thirteenth child of the fifteen born to Samuel Walton Burbank, his father, a man widely known in business relations in his native place. Professor Wickson, of the University of California, recently wrote an appreciative series of articles in the "Sunset Magazine." Professor Wickson says that "Luther Burbank is descended from an ancestry of indoor people chiefly active in pedagogical and manufacturing affairs, and disclosing no notable taste for outdoor pursuits." Evidently the characteristic traits of this man have been inherited through his mother's family. His maternal grandfather, Peter Goff Ross, was a grower of seedling Grapes, and other members of the family indulged in horticulture. Of the mother's family, also, were the Burpees, of whom a well-known seedsman of to-day is a present representative. Evidently "Mendel's Law" is illustrated here; the influence of the maternal ancestors was "dominant." To continue quoting: "His start upon life was not strong; he was slight of build, rather serious in manner, and retiring in disposition. At a very early age he began to make playmates of plants, and his doll was a Cactus plant fondly carried about. In school he was a diligent pupil, but was never able to overcome the fear of the sound of his own voice. He was very apt with the pen, and free in composition." As a boy Luther worked in the shops of the Ames Plow Company, and during his half holidays spent his time among his uncle's seedling Grapes and Rhubarbs. At the age of sixteen he developed an improvement in the woodworking machinery of the factory, which led to the concern offering to retain him at more than twenty-five times his then wage if he would work as an inventor; but he decided on a horticultural career. A question of plant improvement was first brought to his notice by a discussion on Potatoes. Becoming convinced that California offered a more suitable climate for his work, he moved to Santa Rosa in the fall of 1875. Since that time, concludes "American Gardening," his work has been critically watched by students and business men throughout the country, and, indeed, the whole world.

**Mistletoe Plentiful.**

Covent Garden market is receiving its consignments of Holly and Mistletoe. Hampshire has, as usual, sent a good supply of Holly, and Normandy is not behind in its contribution of Mistletoe, which is plentiful. A great proportion of the Holly branches are well laden with berries. Prices being fairly moderate, there is a good demand.

**Byron Bay, New South Wales.**

Byron Bay, on the northern coast of New South Wales, forms the little known threshold of a beautiful district, rich in tropical or semi-tropical vegetation. "Here may be seen," remarks an observant visitor, "all sorts of splendid trees, shrubs, creeping plants, and Vines, growing in wonderful luxuriance. Perhaps the most beautiful of all is the bean tree, *Castanospermum australe*, well known for its handsome dark timber. This tree sometimes attains a height of about 200ft. Some of the gigantic nettle trees attain an equal height, with a diameter sometimes of about 8ft. In the magnificent brush grow also numbers of other handsome trees—the Teak tree, or *Flindersia*; the Rosewood, *Dysoxylon Fraserianum*, which has a red, rose-scented timber; the native Beech, *Gmelina Leichhardtii*, the silky Oak, *Grevillea robusta*, a most valuable timber tree; the red Cedar, *Cedrela toona*; immense Figs, whose huge thin buttresses extend from their stems for yards in all direction; and numbers and numbers of other plants too numerous to mention. The beautiful graceful bungalow Palms, which bear the ponderous botanical name *Ptychosperma Cunninghamii* may be met with in thousands. The cabbage tree palm, *Livistona australis*, also in many places abounds; and the beautiful little walking stick palm, *Kentia monostachya*, the Midginbill of the natives, grows here in millions. This is one of the prettiest and most graceful of the plants, especially when its bright red fruit is ripe. It grows sometimes to a height of 20ft, with stems not more than an inch or two in diameter."—J. P.

**Pineapple as an Aid to Digestion.**

Under this head the "Agricultural News," which is a fortnightly review of the Imperial Department of Agriculture for the West Indies, has a note which has an important bearing on the trade in tinned Pineapples. The flavour of these fruits and their price, as compared with that of the fresh-grown fruit have gained for them a very wide reputation, and tinned Pineapples are not despised even on the tables of the upper classes, so that Pineapples in this form have become a very large article of import, both from the West Indies and from the Straits Settlements. The fact of their containing a digestive ferment, to which the "Agricultural News" draws attention, is another and a strong recommendation to their use as a dessert fruit. For a long time the Papaw (*Carica papaya*) has been known to contain a valuable ferment known as papain, used as an aid to digestion, and the "Agricultural News" now refers to the fact that bromelain, the ferment of the Pineapple, is almost identical in its action with papain. Quoting from the "Lancet," it is stated that "the partaking of a slice of Pineapple after a meal is quite in accordance with physiological indications." Bromelain exerts a powerful action on proteids, digesting 1,000 times its own weight within a few hours. Fibrin disappears entirely, the white of eggs is digested slowly, whilst albumen of meat is transformed first to a pulpy gelatinous mass to be completely dissolved later. Cooking destroys the activity of the ferment, but the "Lancet" is of opinion that unless the Pineapple is preserved by heat, there is no reason why the tinned fruit should not retain its digestive power. On this the "Agricultural News" says: "Unfortunately for this hope, Pineapples are sterilised by steam-heat during the process of canning, the ferment being almost certainly destroyed. Unlike pepsin, the digestive principle of the Pineapple will operate in all acid, neutral, or even alkaloid medium, according to the kind of proteid to which it is presented. It may therefore be assumed that the Pineapple enzyme would not only aid the work of digestion in the stomach, but would continue that action in the intestinal tract. Pineapple, it may be added, contains much indigestible matter of the nature of woody fibre, but it is quite possible that the decidedly digestive properties of the juice compensate for this fact." With such important properties in the fresh fruit, it seems that there is an opening for someone to try his hand in preparing Pineapples for exportation without the aid of heat.—JOHN R. JACKSON, Claremont, Lympstone, Devon (in the "Tropical Agriculturist").



## Christmas.

There are still some Scrooges in the world who profess that they are influenced in no way by the season of Christmas. They wrap themselves in their selfish mantles, and look upon the preparations, the rejoicings, the meetings, and the festivities of the season as a parcel of silly sentiment. Let them do so. Nobody cares, so long as they will hold themselves aloof from the section of humanity that enters into the spirit of Christmastide, and not try to mar the enjoyment of others by attempting to overshadow them with their own wet blanket of discontent. It is not likely that the Scrooges will have their way. Christmas will always be, as it ever was, a time of peace and goodwill, a season when men's hearts open wider than usual, and they are moved towards their fellows with feelings of generosity and sympathy.

If such were not the case, and Christmas ceased to be what it is, can anyone realise the difference it would make, commercially and otherwise, to those who contribute directly and indirectly to the general make-up of Yuletide celebrations? A British Christmas! What a season it is! Though strictly a Christian festival, peoples of many lands, colours, nationalities, and religions contribute towards it; and what a connection there is between Christmas and horticulture! Gardens and gardeners have ever been inseparable to the season, and for long enough before the time preparations are going on in hundreds of establishments, but with one object in view.

### From a Horticultural Point of View.

In the first place, there is the decorative side, for the provision of which gardens and woodlands are mainly drawn upon. The bit of green, the red of the Holly berries, and the bunch of Mistletoe, have we lost our sentiment regarding them? Not a bit of it, and hundreds of wives and mothers when counting out the money from the limited stock for the purchase of modest Christmas luxuries, place a portion aside for the purchase of decorative material. In one house this is little enough, and you could cull as much from one corner of the garden and never miss it; but it means something when you consider the supply of a city. To realise something of what it does mean, go into any great central markets in London or elsewhere, and observe the great piles of evergreens that seem to arrive there by some magic means just before Christmas. One wonders where it all comes from, and where it goes to. It comes mostly from British gardens and woodlands, and is divided up, a bit here and a bit there, by the means of costermongers, dealers, fruiterers, and greengrocers, amongst thousands of householders, who, for old custom's sake, will have the Christmasy look about the home which is introduced by means of Holly-berries, Mistletoe, and evergreens.

For some years the writer was engaged in the supply of evergreens for the Christmas trade of that thriving city of Manchester. About a month before the time the work of cutting began, and all hands were busy carting and tying up the material into faggots, which were transferred to the Cottonopolis by the railway company. Trade was best when Holly-berries were plentiful, and it is surprising what the average decorator thinks of a few red berries at Christmas time. Fogs just before Christmas were tantalising, and sometimes caused serious loss when the market was brisk and prices good, and truckloads of material were lingering on the line hung up by the canopy of fog which hampers traffic so terribly. This is only one instance, and when one considers that the same sort of thing goes on in numerous other places one can partly realise what a drain there is on British Conifer and other trees for Christmas decoration. Anything green will not do, and decorators know the material they want. Holly is always in demand, the more so if it is berried. Ivy sells well, particularly if it has berries on it, and there is a steady demand for Laurel and Box. Rhododendron is not much good, as it flags so quickly, and there is little demand for Spruce, except for Christmas trees. Here, again, a happy Christmas custom has created a trade, and every season thousands of young Spruce are sawn off or dug up with roots for the Yuletide Christmas tree. They have their hour of

triumph when the branches are laden with presents and lit up with coloured candles, and happy children dance round them; but humiliation follows, and the Christmas tree, discarded and bare, ends its days in the backyard or in the dust-bin.

Except in a very small way, the supply of the mystic Mistletoe is not a home trade, and to see its extent you must be on the wharf when the steamers draw up and discharge their freights of crates containing the material which has such a peculiar and time-honoured association with Yuletide. It is grown on trees and land not English, and is cut and packed by people who neither speak our tongue nor share our customs; but they have learnt enough about us to know that Mistletoe is indispensable to a British Christmas, and that is sufficient.

And of late years flowers have played a great part in Christmas decorations, particularly so since market gardening under glass has become such an industry. In hundreds of houses there are late varieties of Chrysanthemums being kept back for Christmas, and in hundreds of others flowers are being forced out of their natural season for the same purpose. Gardeners in the Netherlands grow bulbs by the million, Lily of the Valley crowns, and roots of every other plant almost that will force for the supply of floral material for our British Christmas. By the extremes of cold and heat home growers place the flowers before the man in the street just at the appointed hour. They store up the forces that would have been expended naturally a long time before by means of retarding in refrigerators, and then by the aid of strong heat and good judgment remove roots, crowns, and bulbs from freezing cold to the opposite extreme, and time them so that the flowers come in on the day required. Brains, money, judgment, and enterprise at home and abroad all combine for the one purpose—that Britain may have its flowers at its Christmas festival.

And Yuletide is a time of eating, sometimes followed by dyspepsia and indigestion, but not if fruit plays its proper part in the diet. Who supplies the Christmas fruit? Gardeners, or fruit growers if you like the term better (though I fail to see a distinction), both at home and in every land where fruit is cultivated. Go into a Grape-growing establishment, and see the thousands of bunches hanging there for the Christmas market of those who can afford to buy hothouse Grapes, and for those who cannot pay the price asked, and yet would have Grapes. They come from climes where the Vine flourishes outdoors, and are palatable, even after their long journey in barrels of sawdust.

In his own little way the English fruit grower does something to contribute towards Christmas fare by saving his Blenheim Oranges, Cox's Orange Pippins, and other well-known Apples that are associated with the season, with the hope that he will get the best prices for them then. He is told that he ought to do more in the growing and storage of keeping Apples, and probably had; but in the meantime thousands of acres of fertile land in North America, Tasmania, and New Zealand are producing splendid Apples, and in growing and shipping them our relatives in distant parts of the world have got their eyes on the Christmas market in the old country. There is Great Britain, just a spot on the map of the world; but it is like a magnet, drawing to itself the products of almost every clime and race, and as Christmas time draws on the magnetic power seems to grow in strength.

Need I mention the ingredients of the time-honoured plum pudding, the mince pie, and the Christmas cake, that the garden does so much to provide? At home we do not produce Raisins, Currants, candied peel, and spices; but gardeners of other lands do, though perhaps they know nothing of a plum pudding and its association with an English Christmas. Our own modest contribution to the mince-meat in the way of fruit are the Apples, and it is quite likely they come from America, so that for our Christmas sweetmeats we have to depend largely on the gardens, climate, and fruits of other lands, where the sun ever shines, and the Christmas season is far different to our own.

And apart from the great question of national supply and demand, our private gardener working in the private garden knows the meaning of Christmas. He knows from experience that extra supplies of flowers will be wanted then, for it is a time-honoured custom for British families to spend Christmas at home. Fruit also has to be kept back for the

great occasion, and, besides the rush of decorations, there are a score of other duties that crowd themselves into a very short space of time at the Yuletide season. Thus the gardener is a busy man at Christmas time, but generally a happy one, as he enters into the spirit of the thing with true national zeal, and rarely fails to get a little pleasure out of the season in spite of its multitude of extra duties.

I could go on further, but I have said enough to show what Christmas means to gardens and gardeners at home and abroad, and my closing words shall be to wish the old Journal, its Editor, and everyone of its readers the compliments of the season.—G. H. H.

## Strong Men Come, when England Calls.

As the waves of the ocean press onward with their ceaseless roll, so in the lives of us all there should be some motive force which urges us to constant and strenuous endeavour. Rocks there always will be on the "sea of life," upon which some human vessels, both great and small, will for a time become "stranded," until by a mighty effort they reach smooth waters again, and learn by experience to keep a more vigilant watch in the future. The discoverers of old ran many risks in venturing on unknown seas, and to-day the man who will "launch" boldly into untried enterprises takes the risk which must ever attend a new venture; but the old adage, "Nothing ventured, nothing won," contains a truism which needs upholding as much to-day as of yore, because individuals with grit and enterprise are as the "salt of the earth," and a nation without "strong men" who have the spirit to take some risks in order to carry on a great and necessary work, must be drifting towards senile decay.

I must pause, however, or my pen will be recording thoughts which will bring a "hornets' nest" about my ears. Already I see in imagination a threatening gleam steal over the faces of some "Journal" readers, who, in the endeavour to fathom what I am driving at, almost see in the above remarks a dark hint at the "decadence of gardeners." Let me at once assure them that nothing is further from my thoughts, for, to my mind, gardeners, as a body, stand out as a bright example to the rank and file of workers in other callings, as they are ever willing to adopt new methods in which they can discern distinct advantages, and although hedged around by many restrictions.

It is surprising how much may be accomplished under adverse circumstances. No, I have no shaft to send against gardeners, who too often have to make "bricks without straw"; but I sometimes tremble for my country when in my travels I see the broad acres of lonely derelict farms, and when I hear of the fine crops they produced twenty years ago. The thought often rises to my mind what a different picture these dreary wastes would present in a few years if some of the best of England's struggling gardeners could be placed in possession under favourable conditions.

The old order of things in connection with the land has changed with a vengeance; but that is no reason why in the future a new order, as prosperous as the old, should not arise, if the problems are wisely dealt with as they crop up. The old style of farming has had its day, and however desirable it may be, it seems unlikely that the growth of many farm crops will ever again become really profitable. Dairy farming has been the saviour of many districts, and as the population increases it will doubtless be generally extended, to the advantage of all concerned.

Other great industries are, however, needed to snatch from the grasp of ruin thousands of acres of naturally fertile land, and to provide the England of the future with sturdy sons and daughters, who will gain their vigour from the healthiness of country life. If anything will bring about this improved state of affairs, I, for one, am strongly convinced that fruit culture will. "The Journal of Horticulture," for the last twenty years at least, has consistently urged the crying need for a great extension of the industry; and yet to-day there is more than ever before urgent necessity to plant certain kinds of fruit on an unprecedented scale.

The pessimists of old told us the thing was being greatly overdone, and yet our imports show each year an increase; and, what is more, the average price of good Apples and Pears has been higher during the last few years than ever before. During the same period nearly all manufactured goods have decreased in price, and land has fallen greatly in value. The public generally seem to have no idea of the enormous quantities of Apples imported into Britain annually; but they are well aware that when they get the well grown British article they have the best the world produces. We have the pessimists and the faint-hearted still with us. The former assert the thing is being overdone; the latter that only failure will come if fruit growing is practised except in what are now known as fruit-growing districts.

It is only necessary to travel and observe closely to see how fallacious either of these assertions are. In all counties there are soils and sites splendidly adapted for growing fruit trees. In the western and midland counties the climatic conditions are such that crops are produced quite as regularly as in any of the southern counties, and during some seasons the fruit is as fine as that grown in any county. The fact is that great fruit-growing centres will spring up in various places in the future as they have done in the past, and counties which were once considered supreme will have to yield the palm to younger aspirants to such honours.

No one has urged more constantly the importance of selecting suitable sites where the soil is good before planting fruit trees, but there is plenty of land possessing all these advantages in many counties. I could point to many districts where there are a few isolated orchards which have quite a local reputation for their fruit, and as there is plenty of similar soil around, planting on a large scale would convert such districts into prominent fruit-growing centres. No, there is plenty of suitable soil in England capable of growing all the Apples we require between August and March. If it is selected with judgment, and not pitched upon in a haphazard way, then, with thorough preparation of the soil and good planting, combined with a careful selection of varieties, failure could only be a remote possibility. The rental value of such land in suitable positions might be increased tenfold in ten years by planting it with Apples and Pears, and there is need at the present time for "strong men" with power behind them to forge the links which shall connect present scarcity with future plenty.—ONWARD.

## FIGS UNDER GLASS.

**EARLY FORCED TREES IN POTS.**—To have ripe Figs in April the trees must be started not later than the new year, and they must consist of the early varieties, and such as hold the first-crop fruits, than which there are few to equal the small fruited but excellent Early Violet and St. John's, the latter a greenish-white Fig of fair quality and medium size. These free-bearing properties, however, depend on the trees not carrying heavy second crops the previous year, and on the autumn set being on sturdy, well ripened wood. Angelique is also a good forcer, and so is White Ischia. For general purposes Brown Turkey surpasses all others, being good in both first and second crops, but it must not bear the latter on the points of the shoots, nor too many of them at the base, or the first crop following will not be satisfactory.

A slight warmth at the roots is highly beneficial, but even this has its disadvantages, as when the heat at the roots is 70deg or more during the early stages of growth that is forced too rapidly; therefore see that the temperature at the base of the pots is not more than that until the leaves are unfolding, when the heat may be 70deg at the base of the pots.

The temperature of the house should be 55deg at night, gradually increasing to 60deg and 65deg in the daytime, 5deg more in mild weather, and 70deg to 75deg with sun heat and moderate ventilation. It is better, however, to bring the trees on slowly rather than quickly, especially in dull weather, as foliage produced under such conditions is not of stout texture, but thin and liable to scorch under bright sun and to fall an easy prey to red spider. Water in a tepid state must be supplied to the roots as required, and the trees and house syringed morning and afternoon, damping the house later on, but not the trees, as it is desirable to have the foliage fairly dry before nightfall.—GROWER.





#### **Chrysanthemum, Mrs. D. V. West.**

This snow white Japanese variety, illustrated on the foregoing page, was raised in Australia, and was seen in splendid condition at Mr. Godfrey's nursery in November. It is said to retain its foliage better, and come easier than Madame Carnot, which it somewhat resembles. It is in all respects a good Chrysanthemum.

#### **Two Good Oaks for Planting.**

There is no question of the beauty and utility of the Pin Oak, *Quercus palustris*, for ornamental planting and for shade. Wherever planted, whether as a specimen tree on lawns or lining avenues, it does well. There are in its bright green summer foliage and its broad cone-shaped growth characters very pleasing. It is not alone these merits which make this Oak so popular. There is another and very important one which has had very much to do with its popularity, and this is that it is an easy tree to transplant, as nurserymen term it. As much of its popularity is due to this fact as to the value of its appearance. It would be supposed that all trees of a genus would be alike in respect to transplanting, but it is not so with the Oak. Set out a red, black, scarlet, or Chestnut Oak at the same time a Pin is planted. The latter will do by far the best. The others must be closely pruned to have them succeed. The Pin Oak appreciates a pruning, but does not demand it. It is because a customer finds his Pin Oaks live while the others have a struggle for life, that he orders this Oak again and recommends it to his friends. But there is another Oak which transplants as freely as the one named, yet it seems unknown to general planters. I refer (says Mr. Jos. Meehan) to the *Q. bicolor*, one of our massive native Oaks. Its foliage is very large, the opposite of that of the Pin Oak, and the tree has rough bark when young, somewhat in the way the red Birch has. Where a very large growing Oak, of a character of growth the opposite of the Pin, is desired, try the bicolor, and remember that it and the Pin are two Oaks that rarely fail to grow, having lots of small roots.

#### **Fever in Plants.**

Although animals and plants seem at first sight to be two absolutely distinct groups, and to have little in common, closer investigation points unmistakably to the fact that they are very similar and very closely related to one another. Further, many organisms are known which it is impossible to class with certainty as plants or animals. Let us confine our attention for a moment to one of the ordinary recognised signs of life, namely, breathing or respiration. Both animals and plants breathe. In both oxygen is taken in from the air, and after certain changes carbon dioxide is given out. This process, it is true, is masked in green plants during exposure to sunlight by another process, in which carbon dioxide is taken in and oxygen given out. It goes on, however, in a plant as steadily as in an animal, and there is no essential difference between the respiration of man and that of the humblest vegetable he cultivates. In man it is not uncommon to find that when the health is affected his temperature rises; in other words, he becomes feverish. At the same time the rate of breathing is often increased. Is this true of plants also? Can we throw a Potato or an Onion into a fever? The idea seems absurd. Yet it is an ascertained fact. It was shown by Mr. H. M. Richards ("Annals of Botany," vol. xi., page 30) that if Potatoes or Onions were sliced—that is to say, wounded—their temperature rose, and their breathing became more vigorous. They exhibited, in fact, two of the characteristic symptoms of a feverish person. The rise of temperature was carefully measured: in some cases it was as much as 3deg C. The course of the fever was followed, and was found to reach its height usually about twenty-four hours after the injury; the temperature then began to fall, and reached the normal again on the fourth or fifth day. Experiments such as these help to bring home to one in a striking manner the fundamental relationship between animals and plants.—("Agricultural News," Barbados.)

#### **The Flora of Egypt.**

From the fertility of the Egyptian soil we might expect a specially rich flora, but, notwithstanding the luxuriant vegetation, no country in the same latitude has so poor a variety of plants, and wild flowers are scarcely to be found. There are no plants common to ruins, bogs, or lake, for want of water and shade. The grasses, of which there are a goodly number, never form a green sward; there are no meadows such as charm the eye in other countries, though the clover fields, which serve for pasture, and the corn fields, as long as they are green, compensate to some extent for the deficiency. Even the streams, the numerous water-courses and canals, plantations, with various trees bearing fruit, and the Tamarisk is to be seen everywhere. One of the finest avenues in the world extends from Cairo to the Pyramids, seven miles long, lined with Sycamore and Acaia trees. It was constructed in three months' time by the Khedive in honour of the Empress of the French at the opening of the Suez Canal.

#### **Fruit Pulping.**

An account is given in the annual report on the Saharanpur and Mussoorie Botanical Gardens of some experiments made in the new Californian industry known as fruit-pulping. The idea is to boil down the fruit until it has assumed a semi-solid condition and then evaporate the remaining moisture, so that the pulp can be wrapped in oiled tissue and packed in an ordinary deal box. Experiments were made with Peaches and Mangoes, but the result was not encouraging. One hundred and fifty Peaches, weighing 19½ lb, produced 2 lb of dry pulp, costing 12 annas per lb, without counting the cost of stoning the fruit, boiling, straining, evaporating, putting up the bricks in an attractive form for sale, &c. Thus the cost of producing Peach-pulp bricks is at least 1 rupee per lb; and as the better class of Peaches sell readily at 2 rupees to 3 rupees per 100, and second-rate fruit at 1 rupee per 100, it would not be worth the time and trouble of growers to adopt the pulping system. Moreover (says the "Madras Mail"), it was found that the pulp-bricks would not remain hard and solid for more than a few days in the moist climate of the rains.

#### **Mistletoe.**

As Christmas comes round one's thoughts naturally turn to Holly and Mistletoe, and it is with the latter that we propose dealing in the following lines. Known as *Viscum album*, a name which fully describes its white, viscous berries, it is a native of this island, though not confined thereto, as much of that vended at Noël tides is grown in the Apple orchards of Normandy. It is, however, very plentiful in many parts of the south of England, where it is to be found on Apples, Pears, Hawthorns, Limes, Sycamores, and Poplars indiscriminately, and, much as it may surprise some of our readers, very rarely on Oaks. In Sherwood Forest there is a clump of ancients covering many acres, nearly every tree of which bears its Mistletoe boughs. Old Culpepper tells us that the Mistletoe "flowereth in the spring-time, but the berries are not ripe till October, and abide on the branches all winter." The plant is a parasite, and the berries are a favourite food for thrushes, who propagate the plant by wiping their beaks, against which the glutinous seeds have adhered, against the bark of the tree on which the bird has alighted. The growth of the plant is very slow, and hence it is very difficult to eradicate when once it has become firmly fixed, as the smallest particle of roots will continue to send out shoots.

Almost needless to say, legends galore have clustered around the plant, and the majority of them can boast of a very respectable antiquity. Our ancestors attributed to it miraculous virtues. Albertus Magnus believed it would open all locks, Aubrey tells us how some persons who cut down Mistletoe at Norwood and sold it to apothecaries for drugs were stricken with broken legs and blindness in consequence; while the Druids considered it capable of healing all diseases and acting as an antidote to every poison; while the old herbalists prescribed it as a panacea for apoplexy, epilepsy, palsy, and falling sickness—truly a wonderful plant if we could only believe it all! Really it seems quite a demoralising use to put such a grand old humbug up at Christmas parties for the young folk to kiss under.—W. U. B.



### The Chrysanthemum Audit.

Mr. Molyneux very justly remarks that it will be difficult indeed for any person to cavil at the selection of varieties in his analysis given in the *Journal* last week. I have compared this audit with that of 1898, only four seasons since, but oh! what a difference! That audit seems now to be ancient history. It is very interesting to note the "ups and downs" of some varieties, and, on the other hand, the persistency with which others keep their good positions. *Australie* is one of the latter, and yet it has little to recommend it besides its size and easy culture. The tall habit of the plant goes very little against its popularity. It is very remarkable to note what a large number of newcomers are admitted to the fifty, most of which had poor positions as outsiders in the last audit. *Bessie Godfrey*, the top in the list of last season's novelties, has now 24 votes (out of a possible 27); *Madame Paola Radaelli*, 23; and *Ethel Fitzroy*, 22; all of which only received 4 votes last season. *Duchess of Sutherland* has 22, against 2 of last year; and *Mrs. T. W. Pockett* the same number of votes, against 1 last year. *General Hutton*, 20, against 2; *Sensation* receives 21, against 3; whilst *George Lawrence*, *Godfrey's Pride*, and *Mrs. H. Emmerton*, each not mentioned in the last audit, now receive 14 votes apiece. *Maferking Hero*, another not mentioned in the last, has now 21, but it was introduced the preceding season, so can hardly be classed as a novelty.

Twenty-one electors vote for *Miss Elsie Fulton*, against 4 in the last; and 6 vote for *Princess Alice de Monaco*, against 2 in the preceding audit. The first named was supposed to have been raised by the Maidenhead firm, and purchased by the Ryecroft firm, and sent out two seasons ago. The last named is from *Mons. Nonin*, and was sent out about two years previously. The newest arrival has by far the best position of the two, yet it would be an interesting topic if the voters would inform the *Journal* readers where the two differ. Personally, I believe that there is no difference, and the older variety has been rechristened. Some of last season's novelties cut a very poor figure indeed, but the season may be responsible for this.

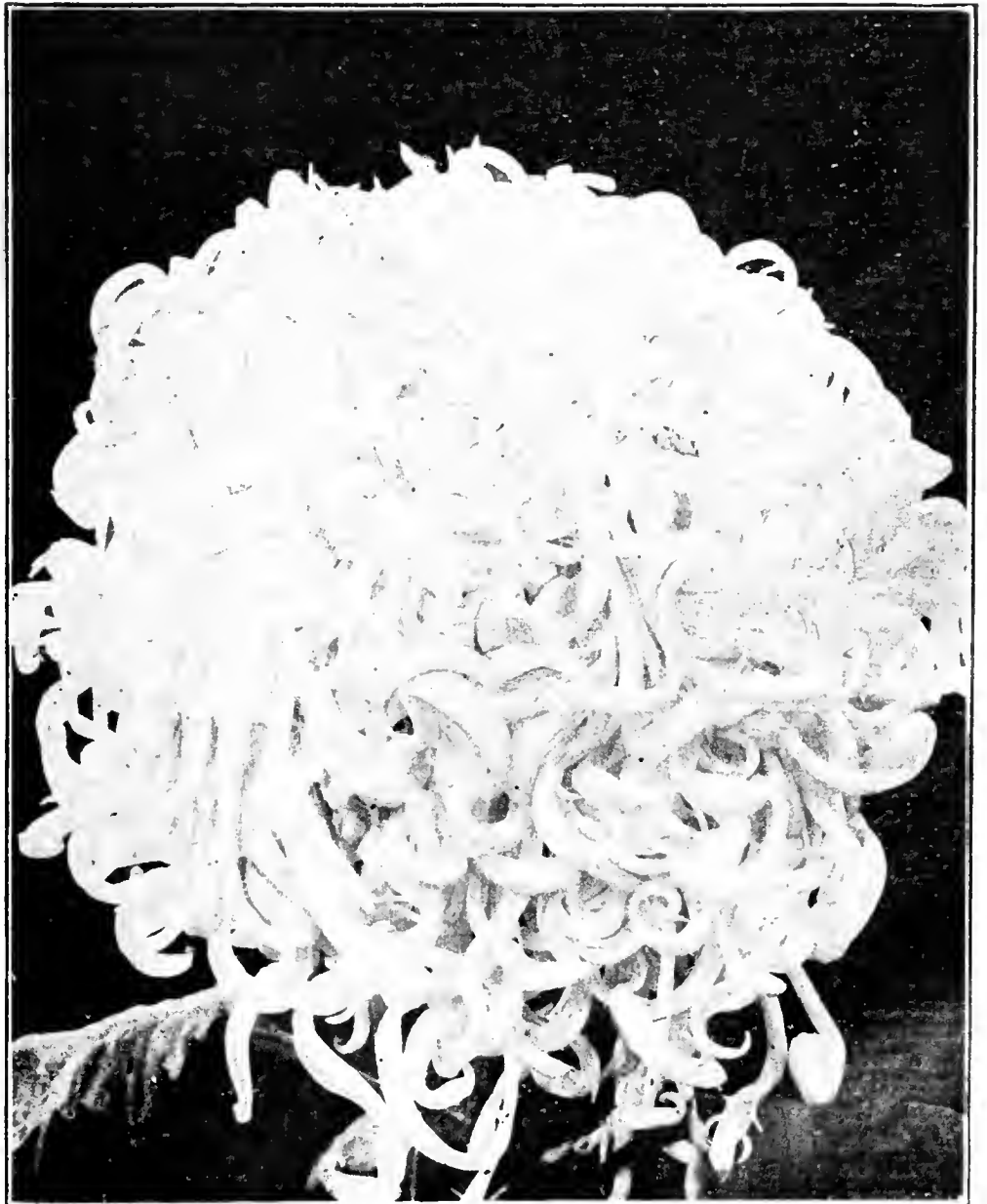
I do not care to say much about my own varieties, but I am certain that *Exmouth Crimson* will prove much better than its present position gives it. *Mrs. E. Hummel*, with 9 votes, against 0 in the previous audit, will "go up" considerably next year, or I am mistaken. It is infinitely superior to *Mr. J. Bryant*, being very much larger and deeper, although somewhat of the same colour. *Nellie Bean* will also rise, and *Miss Lucy Evans* should also obtain a better position. It is very remarkable that *F. S. Vallis* receives 19 votes, and yet when I placed three magnificent blooms before the Floral Committee of the N.C.S. it was passed, as being too much like *G. J. Warren*. The voters seemed to have formed a better opinion of it than the members of the committee, and it is doubtful whether they have seen the variety in such fine form as were the blooms mentioned.

I consider the weakness of the audit is that the votes are recorded not in accordance with the personal experience of the voters gained by growing the varieties voted for, but rather from the blooms they have seen. For example, it is probable that none of the electors have grown either *F. S. Vallis* or *Madame Waldeck-Rousseau*, for the stocks of both of these varieties have practically been confined to the trade. It then resolves itself in some measure, and especially with the new varieties, as to what facilities an elector has had for seeing blooms. Now, as another example of the argument, had the twenty-seven electors seen the fine flowers as staged by *Mr. T. Lunt* at the Edinburgh Show, *Princess B. de Brancovan* would have received three times the number of votes (8) which are now recorded for it. Again, *Miss Elsie Fulton*, or *Princess Alice de Monaco*, would have the premier position for the best white variety had all seen it in the form in which it has been staged. Still, *Mr. Molyneux* remarks: "A selection of varieties under the method adopted appears to better illustrate the opinions of those best calculated to judge as to the selection of a

collection as compared to the making up of a list of those varieties exhibited at any prominent show like that of the N.C.S. or Edinburgh." Yet it was mainly at these two shows that *F. S. Vallis* and *Madame Waldeck-Rousseau* got into favour. Candidly, I am not so much gone on the last named variety as are some. It has size, and that is its chief recommendation; the colour is a bit dull, and with an ordinary season may be more so. Still, it must not be overlooked by up-to-date growers.

The more the audit is examined the more interesting it becomes. It shows the varied opinion of what is certainly the best combination of leading growers and most prominent exhibitors in the kingdom. Let us take a few of the most popular varieties, to wit, *Mrs. Barkley*, *Madame Carnot*, *Edwin Molyneux*, and *Lord Ludlow*—four typical varieties—and yet there are some among the electors who would not place them among "the best fifty," which means that they know fifty varieties which are superior. Now it is reasonable to suppose that at some time or other these varieties have been seen by the electors in remarkably good form, and, judging by these flowers alone, the electors would have placed them among "the best fifty." Having grown them, they are not to be biased in their opinion because some do grow them to perfection. *Lily Mountford* only gets 16 votes out of a possible 27, which is rather disappointing to many growers, whilst *Mrs. H. Emmerton* has 14, and, I believe, time will prove that this variety is placed too high; also that *Madame Herwege* will prove a better variety than *Nellie Pockett*. This last and *Madame Gustave Henri* should receive little encouragement, for the white is not clear enough generally. After having tried it for two seasons, I would recommend growers to try *Madame* (not "Mrs.") *Magelmackers*. It is of the build of *Madame Herwege*, and is full of promise.

In the last audit I wrote as follows: "There are many which are now out of the 'fifty,' but are 'mentioned,' which will find a place in it next year; whilst many, including *Mutual Friend*, *Lady Ridgway*, *Madame Gustave Henri*, *Henry Weeks*, *Pride of Madford*, *Madame P. Rivoire*, *Mrs. Palmer*, and perhaps the *Vivian* and *Morel* family, will be superseded." In the present audit, with the exception of *Madame G. Henri*, all are outsiders. In the incurved section I note that *Countess of Warwick* and *Mrs. W. C. Egan* are again mentioned as distinct varieties, when



CHRYSANTHEMUM MRS. D. V. WEST. (See page 584.)



they are considered to be identical. Madame Durandel, I believe, is the same as that introduced from France several seasons since as Durandel.—W. J. GODFREY, Exmouth.

#### Miss Alice Byron.

I think this variety proved one of the surprises of the past exhibition season, for, although most growers have admired it, I guess few of them a year ago would have advocated its growth as a first-class exhibition variety—nearly all our growers were of opinion that it was too small for the boards. Now I note that it secured twenty-one votes in Mr. Ed. Molyneux's excellent analysis, published December 18, while the highest number recorded is twenty-seven. This speaks well of it for next year's culture. I shall expect to see it higher still in the list next year. Now, apart from its exhibition qualities, it will be known pretty generally in the future as a capital white for cut flowers or decorative plants in the month of December, for it comes most kindly on the terminals, and I have a few really good plants of it for Christmas decoration.—B. R.

#### New Forms Wanted.

I had hoped (writes R. Dean in an American contemporary) the Plant Breeding and Hybridisation Conference, recently held in New York, would have been the means of developing some new suggestions in the direction of obtaining new breaks in Chrysanthemums. We make but little advance with the flower except in the direction of size. New types of Roses and Begonias are forthcoming; the Chrysanthemum appears to be practically barren in this respect. I can foresee the time when there will be a revolt of popular liking for these huge blooms, and when the first indications of this appear, experts should be prepared to put forward some other type or section of blooms, so that there may be secured a transference and not a loss of popular favour and support. One new variety is, after all, so much like another that the cry may soon be started: "Who will give us something new?"

#### Christmas Chrysanthemums.

Happy is the man with a good display of Chrysanthemums in his conservatory at this season; and disappointed is he who has to depend upon smaller subjects for a display. The latter may be had in good variety, but they do not give the bold effect produced by a varied assortment of "Mums." But it is useless bemoaning our fate, for after all it is the growers' own fault; for there are plenty of good varieties for the purpose, and they do not require the elaborate attention necessarily bestowed upon the exhibition varieties. Then, again, we can grow them to any size we like; it is merely a detail of cultivation. Where large plants are desired, the cuttings may be inserted in January or February; while for small pots, such as 5in and 6in, April or May will be quite soon enough. Four or five cuttings should be rooted in pots for large work, and they will make grand plants in No. 16 pots. Their cultural requirements are precisely the same as for the general stock, but it is a *sine qua non* that they must grow to the terminal buds. The latter may be disbudded or left in sprays at the wish of the grower, though some varieties are better disbudded, and others vice versa. When housing care should be taken to give the plants elbow room, so as to avoid mildew and damping of the foliage. Naturally they will not require much fire heat, only sufficient to keep out the frost. Very little feeding should be resorted to, or it is inclined to make the blooms thin in petal, which is very much against their keeping properties.

This season most of the naturally grown plants are later than usual, but the following varieties are good just now:—Niveus, the well-known white, later than usual; its yellow companion, Pride of Ryecroft; Framfield Pink, a good sturdy variety; Western King, white, very good this season; Lord Brook, bronze, rather tall, but otherwise good; Mabel Morgan I have for the first time, and I am under the impression it will make a grand yellow for Christmas; Miss Alice Byron, white, will be largely grown for late work when better known; R. Hooper Pearson, a rich yellow; Mrs. C. Bown, a glorious white for December, with a nice short growth; Mdle. Thérèse Panckoucke, white, very free, but a tall grower; Matt. Hodgson, a bronzy red; Madame A. Rousseau, pink, very free flowering; Tuckswood White, another good white; Putney George, red, and a short grower; Major Plumbe, beautiful yellow, though too tall; L. Canning, dwarf white, well known; Guy Hamilton, ivory white, dwarf, and very free. The new white pompon Lula is very beautiful just now, and promises well. Col. T. C. Bourne, deep red, dwarf; Georgina Pitcher, yellow, rather tall; and Mrs. A. Tate, bronzy red.

It will be seen that there are most whites and yellows, while there is more or less of a famine in the red forms. I often wonder why our raisers do not attempt to produce some really good novelties in the late kinds. Surely it would pay to do so, for the demand from the large market growers would

compensate well. They are always on the look-out for really good late varieties that are of sturdy habit with good foliage and bright decided colours.—J. B. R.

#### Chrysanthemum Mrs. E. Thirkell.

Writing to the Editor of the "Florists' Exchange," the undersigned says: "I noticed the account of a Chrysanthemum in many of the trade papers, which is attracting considerable attention as an exhibition variety. There were two blooms shown at Chicago, under the name of Madame Thirkall. Being interested in all new-comers, and desiring to know of the origin of this one, I have, after some searching, been able to locate the variety. The correct name is Mrs. E. Thirkell; it is one of Mr. Thos. Pockett's seedlings. Herewith I append a description, as given in the catalogue of G. Brunning and Sons, who are noted Australian raisers: 'Mrs. E. Thirkell, very deep yellow, late flowers,



M. C. Cooke., M.A., LL.D., V.M.H.

bronzy yellow, extra large, grand exhibition variety, best on late crown buds.' I furnish you this information with the hope that all parties cataloguing this Chrysanthemum may adopt the correct name, and thus avoid confusion.

—ELMER D. SMITH.

"P.S.—W. Wells and Co., England, catalogue this variety as Mrs. E. Thirkell. Brunning and Sons handle all the Pockett novelties [as do Messrs. Wells and Co.—Ed. *Journal of Horticulture*], and are likely correct.

E. D. S."

#### MORDECAI CUBITT COOKE, M.A., LL.D., V.M.H

Dr. M. C. Cooke is one of the most useful members of the Scientific Committee of the Royal Horticultural Society, and in recognition of his unfailing assistance in matters of plant disease brought before that body, and also in honour of his prolonged labours in the field of Cryptogamic Botany at Kew, the Council of the R.H.S. have bestowed on him the Victoria Medal of Honour. The main points in Dr. Cooke's most interesting career are summarised in that useful publication entitled "Who's Who," from which we learn that the latest Victorian Medallist was born so long ago as 1825, on July 12, at Horning, in Norfolk. His parents kept the village general shop, such as is usual in country villages. As a lad, Mordecai C. Cooke attended the village school till nine years of age; thence was educated by an uncle, a Dissenting minister. He was elected an Honorary M.A. of St. Lawrence University, U.S.A., in 1879, and M.A. of Yale, U.S., three years later. However, he had qualified in various branches of business before these honours were gained. In his youth he had been apprenticed to the wholesale drapery trade, then he became an usher in a boys' school, anon a lawyer's clerk, and for nine years a certificated teacher in a National school. In the year 1860 he was appointed to the India Museum, London, and later was transferred to Kew Gardens, where, as we have stated, his time was largely devoted to Cryptogamia. Dr. Cooke's chief publication is his "Introduction to the Study of Fungi" (1895), but he is author of forty other botanical works. He is an Associate of the Linnean Society, and a member of many other scientific bodies.



### Four-Flowered Tulip.

Respecting the four-flowered Tulip depicted on page 546, I may say there is a branching Tulip on the American market. It is asserted that it produces two or three flower stems per bulb, each of which branch, so that five to eight flowers are borne from each bulb. In colour it resembles Keizerskroon, and is said to force well.—T. A. W.

### Illegal Showing.

I am glad to see that Mr. W. R. Raillem has come into the fighting line on this important discussion, and thanks also to Mr. Taylor's outspoken remarks. I will leave it to more able pens than mine to point out to the miscreants the value of a prize honestly won in comparison to any obtained by fraud. Surely a man must be a hardened sinner if, when his friends, fellow-exhibitors, and the Press are loud in praise and congratulation to him on his success, his conscience does not prick him when in his inmost heart he must know that he has no legal or moral right to either. Does he ever consider the enormity of his misdeed? We will suppose there are six exhibitors in a class, and the first prize is awarded (not won) to a false exhibitor. He deprives the second and third prizewinners of their proper awards and positions. And what about the fourth person, who is out of it altogether, and who probably returns home out of pocket, disheartened, and with weakened reputation? If the head gardener at the hall, manor, or castle resorts to unfair means, it is almost a certainty that one or more of the men serving under him will know that all is not grown on the place. I myself have known places where it was common knowledge with the outdoor men. And when this state of affairs exists, what can be expected from cottagers? The more one probes the matter the worse it becomes, and there seems no end of its evil effects. I would say to those who have sinned, Sin no more, but brace yourselves up, and in future stand or fall on your merits. Friends and acquaintances with whom I have discussed the subject have sometimes replied that they *all* do it, meaning all exhibitors. This assertion, I am quite sure, is not correct. But if ninety-nine out of one hundred did it, it would not make it an honest practice. I entirely agree with your correspondent who suggests that honest exhibitors and committeemen should band themselves together and fight this evil. If they will, do this I am convinced good will result. They must not, however, confine their efforts to their own show, but be on the alert to give information to neighbouring committees. To make my point clear, I myself during the last three seasons could have given information very damaging to some exhibitors at a show eight miles distant from here. When people have the audacity to drive round collecting, and sometimes purchasing, the best that is for sale just previous to an exhibition in their village, I fail to see that it is a very difficult matter to unravel, if officials are ready and willing to perform the unpleasant as well as the pleasant duties pertaining to their office. Some buy their exhibits at one exhibition to take to another. Thus, one lot of Onions or Tomatoes may do for three or more shows should their dates follow closely. Quite recently a prizewinner told me that a gardener wanted to buy his dish of Tomatoes. Does anybody suppose they were wanted for himself or his employer? They might have been, of course, but I happen to know they were not.—G. G. H., Bath.

The only salve as yet prescribed for this sore appears to be that of official inspection of produce *in situ* prior to a show. If that is practicable in a small way, that is, within a circumscribed area from which exhibits are drawn to a local centre, it might prove efficacious so far as it goes, but it certainly does not go far enough to cover an exhibition of contributions from the four quarters of the British Isles, and it is here, I take it, that illegal showing reaches its most rampant form. For instance, say, an autumn (or winter) show, the chief constituents of which are "Mum" blooms and fruit, and for "tricks" of trade commend me to these two great sections, held in Fogopolis, Cottontown, Cakeville, or where you will, what check could obtain over Trickymen's exhibit from Swindleton, 200 miles away? It seems a pity that, before this matter dies out, something wider, farther reaching, and more definite could not be evolved instead of leaving it as a legacy for the next generation to tackle, when exhibitors (honest ones) of this degenerate one, are all in the better land. The scheme of inspective surveillance might, of

course, be experimentally started at cottage shows, or small local exhibitions, but I fail to see how the principle could apply to the high places, and cause the seats of the mighty, to be mighty uncomfortable for them. No. I guess that won't work, and I guess I'll give it up, as I gave up showing years ago, in disgust.—Quiz.

### Gardening and Inventions.

Many persons would hail the meritorious beginning which recently had been made in the Journal with a bearing on the application of the genius of invention to gardening. The spark which was kindled fanned for a time, and, indeed, bade fair to illumine the dark corners of this conservative art, but, like the meteoric flame which crosses the dark arch of the heavens on a moonless night, the glow as suddenly died away in the depths of apathy as the other in the depths of space. This will be considered by many a most decided and regrettable pity, for it is scarcely creditable that in such an immense army, shall I say, of men such as comprise the profession of gardening, no disposition of the inventive faculty should be discernible. Personally, I would fain believe that the profession commands its share of the genius of invention, but in my experience I found a very pernicious agency in the composition of the average gardener which acted always as a deterrent influence in the free course of the presence of such a gift. Perhaps something of this nature accounts for the meagre response which the opening of the subject received from the readers of the Journal. At any rate, I hope the lapse of the subject is not traceable to a growing spirit of diffidence on the part of the gardener. If so, I must say it is altogether new to the pristine character of the profession. In days gone to return no more, the intellectual calibre of the profession was indicative of no smaller symptoms of the inventive faculty as applied to gardening than found among other trades and professions. I trust, whatever may have been the cause, that it shall speedily be removed, and that every man who is in any way connected with gardening will put on record the little discoveries he may have made from time to time, to lighten the yoke of a heavily laden art.—ASTER.

### Judging Cottage Gardens.

It is scarcely necessary to say that the conditions of cottage gardens to-day are vastly superior to what they were some four years since. Nor is the cause far to seek; for, as well as county councils and other public bodies, the owners of many estates give prizes for the best cultivated cottage gardens, and also hold annual shows for the exhibition of their produce. It is very satisfactory to notice the increasing interest that is taken in these gardens, not only in the neighbourhood of our large towns, but in the country as well. The cultivation is more intelligent, and the desire to know the why and wherefore of things. We also find that the owners of these gardens are much more conversant with the different varieties of fruits, flowers, and vegetables. My reason for penning these notes, however, is to give a few methods for judging cottage gardens, upon which I have had to work. One before me, which is copied from the schedule of an exhibition of cottage gardens, is as follows: "Each competitor will be judged on twelve articles, six compulsory, viz., Potatoes, Turnips, Cabbage, Onions, Leeks, Peas; for each of which twelve points is the maximum. Six others must be chosen from the following by the competitor, viz., Beans, Beetroot, Parsnips, Parsley, Carrots, Celery, Lettuce, Rhubarb, Cauli-flowers, Curly Greens, Savoy, Vegetable Marrows, fruits, and flower borders; for each of which eight points is the maximum." This is an expeditious method of judging.

On some estates a list is sent round early in spring giving a list of articles for which points may be obtained, the maximum of all articles being equal. This list is written in a book, and the pages ruled in columns, each column representing a garden. In judging, all that is required is to add the number of points obtained by the competitor opposite the respective articles in the list, the name of the competitor being written at the top of the column. A similar method is used in some places, but instead of pointing all things equal, the most important crops, such as Potatoes, Onions, Cabbage, &c., have a maximum of, say, six points, whilst the less valuable have a maximum of four points. A method, which I do not consider a very satisfactory one, is to point all that is found in the garden, allowing the same maximum number of points for all crops. This makes a great deal of work for the judges. It also induces competitors to grow things that are not of very much value to them simply to gain extra points. Points should always be allowed for order and cleanliness. In some country gardens are found a number of large fruit trees. Some consider that points should not be allowed for fruit when the trees have not been planted by the present occupier. There are constantly points cropping up in connection with this work that are difficult of solution. I should be glad if any correspondent of the Journal would give what



they consider to be a really expeditious and satisfactory method of judging cottage gardens, especially in relation to fruit trees.—J. S.

### Bothy Plan Competition.

I was rather surprised to read Mr. Rabjohn's "wail" in the current issue of the *Journal* re the above. Why not, like the rest of us, have a try with a modest attempt? It is not possible for everyone to compete successfully, but even an attempt would do us no harm, and it will, no doubt, be some practice. It is the same with a competition of this description as with exhibiting—the more competition the more honour in winning, or being beaten by a worthy competitor. If we are beaten, we find out our weak points, and can strengthen them accordingly when the opportunity arrives for another attempt. I am sending my modest attempt, and am sure it has been a pleasant pastime for a few evenings, and an experience which cannot but be most helpful.—J. WILKINSON.

## Societies.

### Birmingham Gardeners'.

The fortnightly meeting of the society was held on the 15th inst., Mr. W. B. Latham in the chair, who was supported by a good attendance of the members. Mr. J. Udale, County Council Horticultural Lecturer for Worcestershire, gave a very interesting and pertinent dissertation entitled "Hardy Flowering Shrubs in Relation to Landscape Gardening." The essayist's main object was to demonstrate the arrangement and massing of flowering shrubs with a view to produce a good effect by the harmonious blending of their inflorescences. Consequently it would be necessary to select shrubs that would flower as nearly as possible simultaneously. The massing system—where admissible—was advocated in preference to the more common one of the intermixture style of planting. A wealthy list of suitable trees, shrubs, and sub-shrubs, was enumerated as applicable for the purpose indicated. Reference was also made to a more extended embellishment of waste tracts, and spots of such as pertain to the mining districts of the Black Country by a proper preparation of the soil, and a suitable selection of trees and shrubs. An animated discussion, in which Messrs. Latham, W. Spinks, C. H. Herbert, Walter Jones, and W. Gardiner took part. A collection of choice dessert Apples was exhibited by Mr. G. Stacey Harborne—grown by a friend in Worcestershire—with a view to enable members to select varieties for future planting.

### Royal Meteorological.

The monthly meeting of this society was held on Wednesday evening, the 17th instant, at the Institution of Civil Engineers, Great George Street, Westminster, Mr. W. H. Dines, president, in the chair. Monsieur C. A. Angot, of the Bureau Central Météorologique de France, Paris, and Professor Willis L. Moore, of the U.S. Weather Bureau, Washington, were elected honorary members of the society.

A paper by Mr. C. V. Bellamy, M.Inst.C.E., on the "Climate of Cyprus," was read by the secretary. This island, which lies towards the extreme eastern end of the Mediterranean Sea, covers an area of 3,584 square miles. It is divided through the centre by the Central Plains, which run east and west, and which are bounded on the north by the Kyrenia Mountains and on the south and south-west by the Troödos Mountains. These mountain ranges have a considerable influence upon the temperature of the central plains, and more especially upon the climate of the capital city, Nicosia, which has a population of about 14,000 inhabitants. The mean temperature for the year at Nicosia is 67.2deg. the extreme highest temperature being 108deg. and the extreme lowest 28deg. The annual rainfall is about 14in, which falls mostly in the winter months. The author also gave particulars as to the meteorological conditions at Troödos, the sanitarium and summer resort of Cyprus, which is situated in the mountains at an altitude of over 5,000ft above sea level.

A paper by Mr. H. H. Clayton, of the Blue Hill Observatory, U.S., on "The Eclipse Cyclone of 1900," was also read by the secretary. The author in a former paper discussed the meteorological observations made along the path of the total solar eclipse in the United States on May 28, 1900, and stated that he found that a cyclone followed in the wake of the eclipse, though the changes were very minute and feeble, the fall of temperature developing a cold air cyclone in an astonishingly short time, with all the peculiar circulation of wind and distribution of pressure which constitute such a cyclone. This theory was not readily accepted by meteorologists, and Professor Bigelow, who has discussed all the observations received by the U.S. Weather

Bureau, thinks that they scarcely confirm Mr. Clayton's conclusions. The author now examines Professor Bigelow's discussion, and points out that the observations really confirm his own statements.

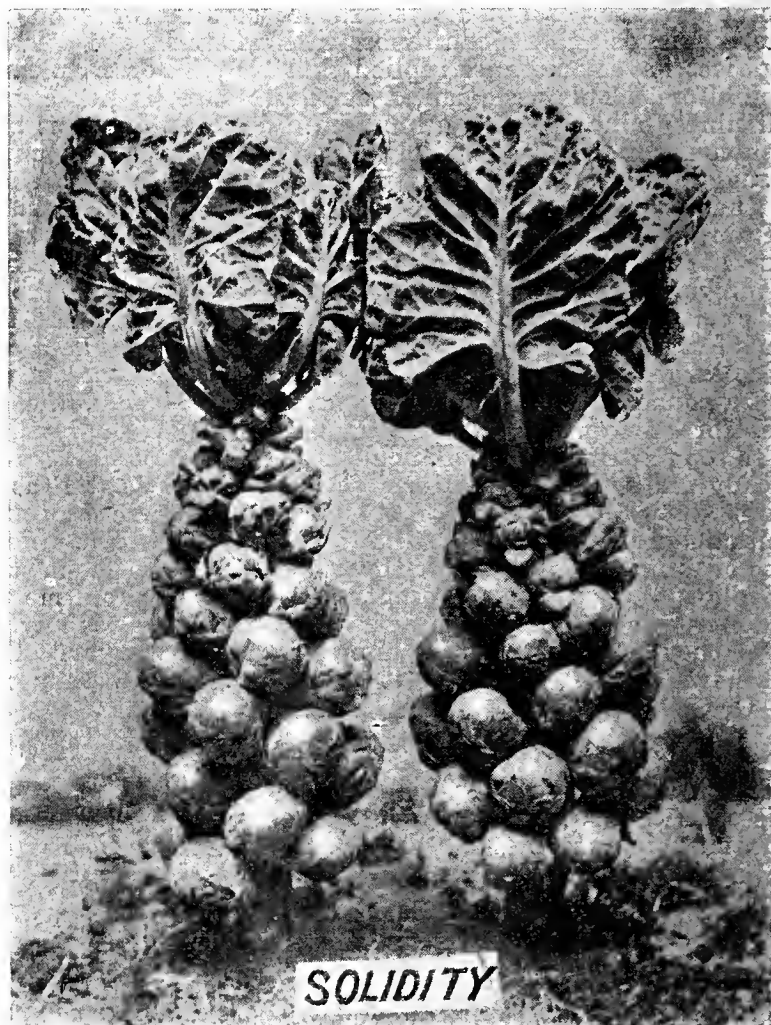
### Ipswich Mutual Improvement.

The last meeting of the year of this association was held on December 18, with the president, Mr. R. C. Notcutt, in the chair. A most interesting paper on the "The Sweet Pea Family" was read by Mr. S. J. Batchelder, lecturer on botany at the Ipswich Science and Technical Schools, who illustrated the various points of his lecture by an admirable series of lantern slides. Taking the Sweet Pea as a type, Mr. Batchelder first described the structure of the flower, and then passed on to the consideration of other common plants of the order, such as the Broom, Furze, Vetches, Clover, &c., noting particularly the adaptability of the plants to circumstances, exemplified by the Vetches and Peas in the formation of tendrils, with which to climb and expose their leaf surface to the light and air; by the production of spines in the case of the Furze and Rest Narrow as a protection against injury by animals; and also by the many arrangements for securing cross-fertilisation of the flowers by insect agency.

He also referred to the remarkable sensitiveness of the leaves of leguminous plants to changes of light and temperature; and concluded by discussing the views now held with regard to the nutrition of the Leguminosæ in connection with the bacteria found in the root nodules. Mr. Batchelder's remarks were followed with evident enjoyment, and at the close of a brisk discussion, in which many took part, a vote of thanks was carried with acclamation.—E. C.

### BRUSSELS SPROUT, SOLIDITY.

The Brussels Sprout, which we are here able to illustrate, by the kindness of the possessors of the stock—Messrs. Alexander and Brown, Perth, N.B.—is a very meritorious variety. From



A Good Variety of Brussels Sprout.

a gardener in the Bridge of Earn district we received "a sampling" of the Sprouts, and in all respects they were satisfactory. They were large, firm, without being absolutely hard, and tasty. The plants grow sturdily (2½ft), and button from base to top, as shown in the illustration, which is from a photograph.

## Young Gardeners' Domain.

### An Old Boy's Greeting.

What of the New Year, young brothers? And what of yourselves? Are you going ahead, keeping pace with the remorseless tick of Time? If so, pass on, all's well. If not so, pause on its threshold and consider, so that at the next knell of a dying year the retrospect then may be brighter than the outlook now. Wise, is it not, to do so? Yes! You agree with me. Then not to do so is otherwise; downright foolish, in fact. Then on, on; no standing still. Everything is moving rapidly; but, mark you, don't lose yourself in the hurrying scurrying crowd, to be carried hither and thither as an inconsequential atom, trusting that somehow, somewhere, and somewhen you will drift into something, settling down respectably like a bivalve on a rock, merely existing to growl at fate generally, and the rotten state of gardening in particular. If you are but an atom in the mass of homogeneous humanity, be a mighty atom. Feel that you are of some consequence in the gardening world; for you are. Feel that fate is in your own hands; for it is. "Know thyself," and then, acknowledging the infinite possibility that is yours, the stern responsibility that is yours, and yours alone, go forth in humble faith, but firm resolve, on, on into the unknown, believing that "Man is his own star, our acts our angels are, for good or ill."

Think! Think in the quiet of your lonely lodging; think at this milestone of Time. Get out of yourself for once, out and above all the miserable medley of little illusions which is ever falling around to shut out the stern realities of life, and think seriously, soberly, not solely on the little I can put before you of this great matter of life—your life; but lift yourself godlike far beyond all that words of mine could express. Fight! Fight it out with the enemy, that's yourself; then act. Let noble thought beget prompt action. Things do not seem quite as they should in the gardening world. Many in Bothydom feel that it is so, and more feel it later on. Most thinking lads are unable to view the outlook with unqualified satisfaction; some few are wholly dissatisfied with it, but fewer still dissatisfied with themselves. To the last and most limited section my heart goes out. Amongst them are the men of the future, and I venture to predict, as I honestly believe, that they can, if they choose, become almost anything they like. If they don't it is because they either do not choose or are ignorant of their inherent power.

To those who have adopted gardening from an unbiassed choice there is little to say. To those who have been forced into it, as many are, happy will they be if their chance profession becomes the profession of their choice. There are, of course, drones, and ever will be in the great industrial hive; no spurring from me, or anyone else, can urge them to flights in the higher life, or do more than get them to emit a buzz of discontent. Far be it from me to disturb their somnolent equanimity; nor, indeed, am I likely to. Yet they are useful in a way, and have their own niche in the great temple of universal economy. It is those who have more or less of the good old gardening grit in them I would press on to bring inspiration into their lives and work that this year, of all years, may for them be a very happy one, some day happier still if in looking back it has marked for them a turning point in the march of Time.

Again. Think, I ask you! Have a little quiet thought on a matter of such immense concern to yourself. Jot those thoughts down with the resolve that comes spontaneously with them. Then, "to be, or not to be," that is the question, and the question for you alone. *Tu es custos.* Endorse the audit January, 1903, and in a year from date look over it, look into it, and again mark time. God speed you on your journey. May you go from strength to strength till you cross the bar into the soul's great ocean of eternity:

Too full for sound and foam,  
When that which draws from out the boundless deep  
Again turns home.

—A. N. OLDHEAD.



### Hardy Fruit Garden.

**PRUNING FAN-TRAINED FRUIT TREES.**—When trained in this manner on walls, some trees, such as Plums, Morello Cherries, Apricots, Peaches, and Nectarines, bear annually profitable crops. The principle carried out with this style of training is not to allow the furnishing of the wall to be taken up with a large number of permanent branches, these being clothed with spurs more or less long, and thickly placed. There must be a certain number of main branches, but these have been originated at an early date in the tree's existence, and are necessary for the proper furnishing of the wall as well as a foundation from which the bearing branches may spring. They are, or should be, arranged at equal distances apart, so as to give an equally balanced tree. From these, young branches or growths may be trained to cover the rest of the space. In the case of Morello Cherries, the wall space may be freely covered with young growths of the current year, secured about 3 in apart. These growths must be reserved in summer, during which time there is some difficulty in finding room for them; but after the crop has been gathered, the shoots which have borne the crop are cut out, and those reserved trained in. The same method of procedure is followed with Apricots, Peaches, and Nectarines, though young shoots are not quite so freely laid in nor so close together. One great advantage of fan-training is that it is quite easy to rearrange the branches when there are vacant spaces requiring to be filled. In pruning now, cut out all the superfluous wood, whether it be old bearing wood or growths exhausted by age, first. Next, as there are usually more shoots than room can be found for, a judicious selection must be made of those suitable for training in and are well placed for the purpose. Morello Cherries and Plums may be pruned now, leaving Apricots, Peaches, and Nectarines for a few weeks longer.

**SMALL BUSH FRUITS.**—The pruning of Gooseberries, Currants, and Raspberries may be carried out now, though it is often usual to defer the pruning of the former until early spring. There is, however, no reason why, if more convenient, the pruning should not be done at the present time, especially if the branches can be dusted over with soot or lime as a means of repelling birds which destroy the buds.

**BUSH GOOSEBERRIES** ought to have sufficient room between them, so that it is not difficult to get round for all purposes. A good thinning out of unsuitable growths and branches should first take place, dealing with those at the base and descending to the ground, also the crowded centres. Follow this by a general reduction of the other shoots. The system of shortening or spurring back growths is not to be recommended. Young, well-ripened growths will bear freely, and the object in pruning must be to leave a fair number of these, and if they have unripe buds such may be cut back to well-ripened wood.

**BUSH RED AND WHITE CURRANTS** can only be profitably treated by one method of pruning, and that is purely the formal or cordon style. Bushes may usually have five or seven main branches. The side growths on these must be pruned back to within an inch, and the leading growths the same, unless further extension is necessary. Sometimes it will be essential to encourage fresh growths from the base to take the place of worn-out branches. These growths should be slightly shortened each year, so that the production of side growths may be encouraged.

**BLACK CURRANT BUSHES** are treated in pruning on the simple plan of cutting out the old wood and retaining vigorous young shoots for bearing, not shortening these at all. They will bear profitable crops, the berries and bunches being finer than any produced on older wood.

**RASPBERRIES** offer but little difficulty in the matter of pruning. The canes which have borne fruit during the past season are dead and useless, and should be cut down close to the ground, leaving plenty of space for the new canes, which are very strong and vigorous. When numerous, make a selection of the best, and limit the number to half a dozen to each stool, or, if in lines, sufficient to train in 6 in or 8 in apart on the trellis or wires. Suckers issuing at a distance should be dug up.

**BLACKBERRIES AND LOGANBERRIES.**—Both produce long growths during the season, which require to be well ripened, shortened slightly, and trained in on a trellis, or on wires, to fruit, securing the growths more or less horizontally. They will succeed trained in upright form, or round stakes placed in triangular fashion.



**JAPANESE WINEBERRY.**—Similar treatment to that accorded for Raspberries is admirably adapted for this fruit. The fruit is borne on the strong, fully-ripened suckers the year following their production, hence after fruiting prune away these old growths entirely to make room for the new. It is important that the growths should have had every opportunity to ripen well.—E. D. S.

### Fruit Forcing.

**PEACHES AND NECTARINES: EARLY FORCED HOUSE.**—The buds of trees started in former years during December are swelling freely and showing colour, so syringing over the trees should cease, as the water often causes the flowers to damp. Maintain, however, a genial condition of the atmosphere by sprinkling the floor and border with water in the morning and afternoon of fine days. Provide a little ventilation constantly at the top of the house. Raise the heat early in the day to 50deg, and not exceeding 55deg from fire heat, and admit a little air, yet not so as to lower the temperature below 50deg. Increase the ventilation with the sun heat, having it full at 65deg, and gradually reduce it with the declining temperature, closing (subject to a small amount of air being left on) for the day at 55deg. On cold nights the minimum temperature should be maintained at 40deg to 45deg; between the latter and 50deg is ample on mild nights. Nothing is gained (but the prospect of a crop may be lost) by undue haste until the days have turned, and there is an increase of light and length of day. Nevertheless, aim at steady progress, allowing the trees abundance of air, and a genial warmth by day, with rest at night.

**SECOND EARLY HOUSE.**—The very early Peaches, Alexander and Waterloo, have not proved satisfactory varieties in many places for early forcing, through casting the buds, though when the trees are grown as standards and pinched, the buds are retained on the latest made wood, and the bearing is satisfactory. Early Louise is generally too poor in colour to please either at table or for marketing purposes. Hale's Early is everything desirable as regards size (being medium), colour, and quality, but the tree has the bud-dropping defect in less degree only than marked in Alexander and such varieties as Early York. Of all varieties, Royal George holds its buds the best, and for general purposes the best of all Peaches for forcing. Stirling Castle, of the Royal George type, however, is quite as much in favour as Royal George in some localities, especially northern, for early forcing, and, though somewhat smaller, has good colour and excellent quality. Dymond, a fine, large, highly coloured fruit, ripens about the same time as Royal George, and is first-rate in quality. In Nectarines, Cardinal is, perhaps, unrivalled as a first early, and Early Rivers comes next, for Lord Napier has a bad fault of shrivelling at the apex, and this detracts from the appearance of the fruit, though not its quality, which is excellent. Elruge is the usual companion for Royal George Peach, and is unsurpassed; for, though Stanwick Elruge is larger and ripens a little earlier, it has a bad habit of dropping its fruit when commencing ripening. All these things tell in marketing returns. If the house has been open to receive the autumn rains, the border will be thoroughly moist to the drainage. If, on the other hand, the lights have not been removed, there may be need for repeated waterings to bring the soil into a moist, but not sodden, condition, as is often the case by dosing with liquid manure at the time of starting or just before. Judicious applications of liquid manure help them immensely, and where the drainage is efficient, there is little danger of the soil getting sodden by the rainfall or applications of water. Fire heat will only be necessary at the commencement to prevent the temperature falling below freezing point at night, and to maintain 50deg in the daytime, admitting air freely at and above that heat.

**SUCCESSION HOUSES.**—The cleansing of the house and trees should be pushed forward, and brought to a close as soon as possible. Where the trees have been infested with brown aphid, red spider, or scale, it is desirable to syringe the whole house with hot water at a temperature of 140deg, which will soften the dirt and destroy all the insects it reaches. The woodwork should then be thoroughly cleaned with carbolic or paraffin soap and water, using a brush, and the glass inside and outside with clear water. The trees should then be dressed with an insecticide, those advertised being handy and effective, adhering to the instructions. Or dissolve 1½lb of soft soap in a gallon of soft water by boiling, and on removing from the fire add half a pint of paraffin oil, and stir briskly, so as to thoroughly amalgamate the oil with the soapy solution. For use dilute to six and a quarter gallons with hot water, and apply at a temperature of 130deg to 140deg, either by spraying or application with a brush, the latter being the most effectual when done thoroughly, and care taken not to dislocate the buds. Prior to this the trees will have been pruned, and after dressing the branches can be re-arranged, and the growths trained to the trellis. The walls should be limewashed. Re-

move the loose surface soil, add fresh lumpy loam with a fourth of well-decayed manure, and supply a handful of some approved fertiliser per square yard. Dissolved bones, dry and crumbling, five parts, sulphate of potash three parts, sulphate of ammonia one part, and ground gypsum two parts (mixed) may be used. If the soil be rich and inclined to dampness or soapiness, apply basic slag phosphate at the rate of 1½lb per square yard, and point in without disturbing the roots. In the case of the other mixture a light scratching with a rake or fork will suffice, and the rain or watering will work the ingredients into the soil. If the roof lights are fixed ventilation should be given fully, the trees being afforded as much rest as possible, care being taken not to allow them to become dry at the roots. If the roof lights are movable, and have been removed, they may remain off until the time arrives for starting the trees, or until the buds commence swelling, when the lights must of necessity be replaced to insure the safety of the buds and blossoms.

**UNHEATED HOUSES.**—These structures are often made receptacles for other plants, and the welfare of the trees is more or less interfered with. The better plan is to remove the roof lights and let the trees and soil have the benefit of the exposure. The trees will not take the least harm, no matter how severe the weather may be, provided the wood be well ripened; but if there is any doubt about that, the lights are best retained over the trees, as frost acting on such whilst wet may cause their destruction. In the latter case, and also when the lights are removed, pruning may be deferred until the buds commence swelling, or, preferably, proceed with it, cleansing the house and trees as opportunity offers, and as detailed for succession houses. If the trees are disposed to make long-jointed wood, it is advisable to avoid nitrogenous manures, especially those of a quick acting nature, as nitrate of soda and sulphate of ammonia, also potassic, such as muriate of potash, supplying bonemeal or basic cinder phosphate, which furnishes phosphoric acid and lime. Potash, if given at all, should be in the form that will hinder its softening tendency, such as refined kainit (double sulphate of potash and magnesia), using about equal parts of it and basic slag phosphate, supplying 4oz of the mixture per square yard, pointing in lightly. On the other hand, where trees make too little wood, and are more prolific of fruit than desirable for attaining a first-class size, the border may be dressed with a combined phosphatic and nitrogenic manure, say, dissolved bones two parts, nitrate of potash one part, using 4oz per square yard. If a limy soil, use steamed bonemeal three and a half parts, muriate of potash one and a half part, and nitrate of soda one and a half part, applying 4oz of the mixture per square yard. The mixture should be given when the trees commence swelling the buds, washing in moderately, repeating when stoning is completed. These elements mainly benefit the trees in the year of application, therefore they must be applied when they can be appropriated and transformed into imbibable form. This is when the trees are in growth, and to benefit the fruits the manure must be available whilst they are swelling. Carefully examine inside borders, and supply a thorough watering if dry, or lack of moisture at the roots will cause the buds to fall later on. Keep the houses as cool as possible, so as to insure complete rest.—ST. ALBANS.

### LARGE-FLOWERED CLEMATIS FOR SPRING.

Every nurseryman and every florist knows of the loss of plants of Clematis, both by themselves and their customers. This loss is more likely to occur when the creepers are set in the fall than when done in spring, having in mind the large-flowered sorts principally. These are largely grafted on the *C. flammula*, and the fleshy roots of this stock do not take kindly to fall transplanting. Just why this is I cannot say, and it may not be so generally; but it has been my experience that to set out the plants in the fall is almost equivalent to throwing them away. That the cold soil has something to do with it is believed, because, when potted and placed in a greenhouse, the result is different. Magnolias and Tulip Poplars behave in a similar way, and they have fleshy roots. Transplant them in autumn, and they die for sure; set in spring, they grow. Careless planters cause the death of many Clematis by not spreading out the roots. They set them in a bunch, as if the cluster was one root, resulting in the inner ones getting not a particle of soil to touch them. These roots rot, and the whole mass becomes diseased. The roots should be well spread out, so that each is encased in soil. Sand is good to use to cover them with, as it works in well around the roots. Many trees, evergreens, such as Hemlock and Arbor Vitæ, especially, are often destroyed in the same way. They have large clusters of small roots, mat-like in appearance, and it needs great care to have the soil reach everyone.—J. MEEHAN (in the "Florists' Exchange.")



\* \* All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

**BOTHY PLAN COMPETITION.**—A number of plans have been received.

**PEARS NOT RIPENING (A. L.).**—Many Pears fail to ripen because they are gathered too soon, and then stood in a very light dry place, whereby their juices escape and the fruit becomes dry and remains firm. As you give us no particulars to guide us in forming a judgment in your individual case, we are only able to give this general reply. We did not publish the report to which you refer, because it was a distinct and most effective advertisement of the products of a firm who do not advertise in our pages. We do not, however, suppose for a moment that you were animated with other than a worthy motive in sending the report.

**WIREWORM AND GRUBS IN A GARDEN (Irish Subscriber).**—If wood is plentiful in your district, and can be had at little beyond the cost of cutting, the best thing to do would be to make some fires, and when strong enough dig soil from around them and place on to be scorched. This would not only extirpate the grubs, but would be of greater benefit to the soil than a heavy dressing of manure. Failing your ability to act as suggested, we should use gas lime, fresh and strong, at the rate of half a ton to the acre, carefully digging it in and mixing it with the soil, not merely burying it in layers in the trenches formed in digging. This may be done now, and the sooner the better with land that is quite vacant, but not half that quantity must be applied to land that is cropped or within three months of sowing or planting. Either in addition to that dressing or independently of it ordinary fresh slaked lime may be pointed into the soil in spring, shortly before sowing or planting, at the rate of fifty bushels per acre, and twice that quantity would do no harm if the land is strong or very rich.

**PRUNING GOOSEBERRIES (Pershore).**—Whinham's Industry Gooseberry has been illustrated in this Journal, and testimony published of its productiveness. You are not likely to spoil your newly planted trees by rather close pruning, provided you cut to prominent buds on the young wood, or that formed last year, selecting those buds that point in the direction you wish future growths to extend. First thin out the growths if numerous, making cuttings of those removed, and leaving those retained 6in asunder. These may be shortened to 3in or 4in, the parts removed, if long enough, being inserted as cuttings. When a choice is afforded, we prefer cuttings 15in to 18in long, but have inserted them less than a third of that length, or two joints within the soil, and one or two above it, the buds being removed from the portion inserted if suckers were not desired for future cuttings. The cuttings should be inserted firmly in sandy soil. The leading growths of established Gooseberry bushes may be left longer than above indicated, and side growths from the main branches may be shortened to within an inch of the base of the young wood both on newly planted and established trees.

**PRUNING FRUIT TREES (W. A. K.).**—The condition of the roots is an important factor in determining the extent to which the branches of recently planted trees should be shortened. The more plentiful the roots are, especially those of a fibrous nature, the longer the branches may be left, and the more sparse the roots the closer should be the pruning of the shoots. See our reply to "W. J." on pruning and planting Apricot trees. You will perhaps not err by removing about one-fourth the length of the branches of your trained Plum and Cherry trees, but the roots must be your guide. The pyramid trees should be thinned out if the growths are numerous, the main branches being from 9in to a foot apart, any side growths on them shortened to about two buds, the terminals being left 8in or 9in long, according to their strength and the symmetry of the trees. Stone fruits are best attended to by disbudding and pinching the growths in summer so as to reduce the necessity of winter pruning to a minimum. Morello Cherries when established require scarcely any pruning in the winter, as the wood if trained thinly in the summer in order to become matured bears throughout its length like that of Peaches. It is often advisable, however, to both thin out and shorten the shoots of newly planted trees to insure a good growth the first season, then disbudding to prevent over-

crowding is the most important point in management. The "Garden Manual," published at this office, price 1s. 6d., post free 1s. 9d., contains practical instructions on the management of trees.

**ADDRESSES (A. C.).**—We think you can obtain the information on meteorological instruments you require by writing to Messrs. Negretti and Zambra, Holborn Viaduct, London.

**BOOK WANTED (A. B. C.).**—We know of no book at present in print on the subject of table decorations. Such a book would find a ready demand, and we suggest that some lady or gentleman might compile one.

**GHEENT QUINQUENNIAL EXHIBITION (J. S. Brunton).**—Our brief report of this exhibition, in 1898, appeared in the issue for April 21 of that year, pages 350 and 351. Our publisher charges 1s. 4d. per copy for a number so far back, which, moreover, may not be in stock.

**EUCHARIS ROOTS DESTROYED (J. F. G.).**—The bulbs are attacked by the destructive mite that is not by any means easy to eradicate, still we have seen bulbs quite as much injured as those you have sent that were cleansed, and afterwards rooted freely, healthy plants resulting, and now producing flowers. Remove all the injured roots and scaly matter from both the base and neck of the bulbs, then wash them thoroughly in a solution made by dissolving 2oz of softsoap with a lump of soda as large as a nutmeg in a gallon of soft boiling water, stirring in briskly while still hot a small wineglassful of common petroleum, such as is burned in lamps. When this has cooled somewhat, but is still as hot as the hand can be borne in it for a moment or two, dip the bulbs in it and rub the solution into every fissure with a soft brush. This mixture will destroy all the mites that are reached. Place the bulbs in small, clean, well-drained pots of rather sandy turfy loam, embedding them in and surrounding with crushed charcoal, plunging the pots in bottom heat if convenient; then, if the soil is kept moderately moist, but not distinctly wet, fresh roots will in all probability be emitted. A little soot and bruised charcoal mixed with the turf used will be an advantage, as much as would fill a dessert spoon being sufficient of the former for a 5in pot; charcoal may be safely used more freely.

**PLANTING AND PRUNING APRICOT TREE (W. J.).**—We presume your tree is young. If it is well rooted—that is, has a good number of fibrous roots, we should not shorten the branches to any great extent. In planting, cut off all jagged roots and bruised portions and plant in a mixture of fresh loam, lime rubbish, and wood ashes, laying the roots out straight, separating them, and packing the soil rather firmly round them, covering about 5in deep and spreading littery manure over the surface and for a foot or more beyond the extension of the roots. If the branches are numerous remove some of the weaker entirely, so that the others can be disposed 8in or 9in apart, and if there is a foot between them at a distance of 3ft from the stem all the better. Assuming roots are plentiful, we should only remove the unripe ends of the branches, say a length of 6in, more or less according to their condition and with due regard to the symmetry of the tree, cutting from below and starting the undercut above what is to be the terminal bud, not below it, bringing the knife out above, as is frequently done. The lower branches of a tree should, as far as possible, be in advance—that is, longer than those above them, so that the lower part of the wall may be furnished. There is no difficulty in covering the upper portion. When a branch is disposed to lag behind, it should be trained more or less towards a vertical position, those fully too strong being correspondingly depressed. When luxuriant shoots push from the centre of the tree and threaten to draw the sap from the weaker growths below, the tips may be taken from the strong shoots when 6in long, and the secondary growths that will push will quite equal in strength the first growths on the lower branches. Apricots trained thinly and a good balance of growths maintained in summer, the roots encouraged to extend in rather firm and not over-rich soil near the surface, produce short-jointed wood that matures and becomes fruitful in character, and no more shortening of the branches is then required in the winter than may be advisable for forming a well-balanced, fruitful tree. Do not secure the branches tightly to the wall on planting, as the soil may settle somewhat and drag the roots downwards if the branches are immovable. The Hemskerk is a variety of the Moorpark, and one of the most useful Apricots you can grow.

**NAMES OF FRUITS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (A. B.).—1, King of the Pippins; 2, Nelson's Codlin; 3, American Mother; 4, Blenheim Orange; 5, same as No. 1; 6, Red Streak.

**NAMES OF PLANTS.**—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (L. F.).—1, Tibouchina macrantha; 2, Polygala oppositifolia. (H. J.).—Mesembryanthemum sp. (T. P.).—1, Dendrobium aureum; 2, Cypripedium Curtisi. (T. L. F.).—1, Azara microphylla; 2, Berberis asiatica; 3, Jasminum nudiflorum; 4, Begonia manicata variegata.





## Land Drainage.

As this topic is one which annually crops up during the winter season, a few special words in connection with it may not be out of place. England is, in itself, rather a flat country, and although we see on the map ranges of hills, they are, as a rule, of slight elevation, and the lower reaches of the rivers are almost at a dead level. Very little of this low lying land is now out of cultivation, for enterprise in drainage works has converted much of it into fertile, and therefore valuable fields; but although much has been done by landlords and drainage commissioners in cutting main drains and keeping open the natural fall of watercourses and rivers, yet much depends upon the advantage which a tenant may take of the draining opportunities which lie at his elbow. There are many ways of laying drains, and it is easy to find any but the best, and it is to suggest the latter that we are now writing.

Experts on drainage matters vary as to the depth at which drains should be laid, but there should be no hard and fast rule. We will lay down as the first axiom: That no under draining should commence more than fifteen chains from the outfall, i.e., from the open drain into which the under drain falls. Fifteen chains is really a very long length, and ten chains should be the limit. Water will not flow readily without sufficient vent, and the longer the length the greater is the difficulty in this respect. Every field should be drained by itself, i.e., have its own drainage system independently of the next.

The drainage of each field should be somewhat of the nature of the branches of a tree, or of two or three trees, the branches carrying the water to the main stem, or stems, and through them to the open drains or outfalls. For drains to fully carry out their proper functions, however, they must have an air supply at the upper end, and we apprehend that it is the want of this which makes so many drains work so badly. The more sodden the land, and the more necessary the drainage, the greater the vacuum caused by the absence of vent at the upper end; therefore we would urge all persons who have drainage of the land to contend with—and when we use the word contend we mean that no one would willingly undertake for amusement—to make the best use of their outfall, and by so doing to bring the upper portions of the drains in each field as near the surface as is compatible with good and sufficient cultivation.

If the land be fairly well drained to a depth of 20in, few useful plants will refuse to grow in it, and even in very stiff soil water will find its way to a shallow drain which has an upper vent, and we are therefore strongly in favour of carrying the upper end of land drains right up to the boundary of the field, and to an open ditch, if there is one. A syphon is excellent when it is started, but what of it when the suction is the wrong way? As we have already stated, all drains should be as short as conveniently may be, and the system of drainage of each field arranged in the simplest manner. In the case of a long, narrow field, with a main open drain at its lower end and a subsidiary drain running down one side of it, the drainage should consist of a number of small drains running across the field in a slanting direction to the side drain. The water is much more quickly brought into the open, and the drains, being short, run much more freely than they would if they were under ground the whole length of the field.

In laying field drains it is most necessary to keep the fall even and regular, and as there is much less difficulty in doing this in the case of short lengths, this is an additional argument in favour of independent cross drainage. But be the drains long or short, the ground should first be thoroughly surveyed, and levels taken, so that the exact amount of fall may be known. If stakes are driven into the ground at about two-chain intervals, so that the tops of all the stakes are at one uniform height above the pro-

posed drain, the workmen can hardly get far wrong. To get the pipes laid quite evenly a long and stiff lath may be used.

There is no need to dig much wider than the width of the pipes to be buried, in the case of shallow drains; but deep ones entail the removal of a quantity of soil at great expense, and it is often quite unnecessary. It is not a good plan to take advice from men who are likely to have the work to do, for if work be slack at the time they may urge an unnecessarily expensive scheme in their own interest.

When filling in after the pipes are laid, fine soil should never be put in first. In the case of grass land the top sod may be put in grass downwards, but thorns or hedge brushings are still better, as they act as conductors of the water to the crevices between the pipes, and prevent these joints from becoming closed up. In the case of arable, and especially strong land, something of this kind to lie above the pipes is almost a necessity if the greatest benefit is to be obtained, or, in some cases, any benefit at all.

As regards the pipes or tiles to use, there is much difference of opinion. Although the 4in pipe, with its flat bottom and round arch—but, of course, entirely round inside—is now almost universally used, we still have a liking for the old-fashioned tile, like an inverted U, which stood upon a separate flat tile, forming the bottom. These were not readily laid, but they had to be laid carefully, and that often prevented scamped work. The flat bottom rendered them rather more liable to silt up, but they had an attraction for water and made a most effective drain. In the words of an old drainer, "They could utter a lot o' watter."

## Work on the Home Farm.

We have had a mild week and much drier weather, and at last have the gratification of seeing a goodly acreage of Swedes in heaps and covered with soil. The crop is most satisfactory, and the men are inclined to grumble at the price (9s. per acre). Perhaps they have a right to a growl sometimes. Of course, they do not take the infection from their employers!!!

We have got the steam cultivators at work at last, and as the owner is full of orders and most anxious to press on with his work, we hope the work will soon be done. The work—ploughing seeds for Potatoes—must be properly done, and the depth of 10in maintained throughout, so we have to keep a strict look-out, for it is surprising what a difference is made to the pace of the plough by 2in of depth. If the man on the plough has a monetary interest in getting the work done quickly, a man will be needed to watch how the work is done and report failures.

The horses are occupied in ploughing Turnip land, which has dried nicely this week, and turns over satisfactorily. There are also a good many Turnips to cart for the cattle in the yards. The roots are rather a long way off to lead home, but we have plenty of them and they are very good meat, ripe and sound. So we shall use them freely, and save straw and hay as much as possible.

With plenty of roots to pulp, dried grains are a most useful form of purchased food, especially for growing stock. They provide the proportion of albuminoids which root crops lack, and the addition of a small quantity of sharps or barley meal would complete an excellent ration. Straw is fairly plentiful this year, but much of it is weathered, and with plenty of Turnips we should reduce the use of cut straw where possible. Treacle in moderate quantity is an excellent addition to a feeding ration, but its extended use largely depends on the chaff or cut straw supply, for it must be well diluted with water, and then requires a large bulk of chaff as a medium to be consumed with.

We have had a sale of Turnips in the parish, and there were no bids. No further comment is needed as regards the Turnip crop. As a consequence, all cattle and sheep are dear. Although meat is scarce and commands a good price, store cattle and sheep cannot be bought to pay. Newspaper quotations of the pig markets vary very widely. Pork is dear enough here. We know that 8s. per 14lb has been given by weight. Young heifers should be put to the bull now and they will calve down when they are most wanted. If you start them breeding in autumn it is not difficult to keep them to it.

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